BEFORE THE PUBLIC SERVICE COMMISSION OF WISCONSIN

Investigation into Ameritech Wisconsin's Unbundled Network Elements

Docket No. 6720-TI-161

POSITION, PROPOSED CONCLUSIONS OF FACT,
AND PROPOSED CONCLUSIONS OF LAW OF
AT&T COMMUNICATIONS OF WISCONSIN, L.P. AND
TCG MILWAUKEE, d/b/a AT&T LOCAL SERVICES,
MCI WORLDCOM, INC., McLEODUSA TELECOMMUNICATIONS
SERVICES, INC., TDS METROCOM, INC.,
TIME WARNER TELECOM OF WISCONSIN, L.P.,
AND KMC TELECOM, INC.

ISSUE SUMMARIES

ISSUE I.A

- I. Development of Cost Study Principles and Requirements Issues Consistent with 47 U.S. § 252(d):
 - A. What are the appropriate principles and requirements to be used to develop cost studies pursuant to 47 U.S. § 252(d) and relevant State Law?

CLEC POSITION:

TELRIC principles should guide the development of the cost studies and pricing determinations in this docket.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.A.-1 through I.A.-11

CLECs' Reply Brief: I.A.-1 through I.A.-4

CLEC TESTIMONY REFERENCES:

Because this was a legal issue, the CLECs presented legal argument rather than testimony.

PROPOSED FINDINGS OF FACT

 The parties agree that TELRIC principles are the appropriate principles and requirements to be used to develop cost studies and pricing determinations in this docket.

PROPOSED CONCLUSIONS OF LAW

The FCC's Local Competition Order (In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 (Aug. 8,

- In 47 CFR §51.505(c)(1), the FCC defined forward-looking common costs as "economic costs, efficiently incurred in providing a group of elements or services."
- As further provided in the Local Competition Order (¶ 679), "[a]dopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market. ... Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels."
- The Eighth Circuit's ruling in *Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000) ("*IUB II*"), *cert. granted*, 121 S. Ct. 877, 148 L.Ed.2d 788 (2001) does not alter the law requiring the application of TELRIC principles
- Even if *IUB II* had not been stayed, the Eighth Circuit's conclusions regarding the FCC's pricing rules would not limit this Commission's authority to apply TELRIC methodology to the cost studies and pricing determinations in this docket under Section 252(d) of the federal Telecommunications Act of 1996.

ISSUE I.A(1)

(1) What are the differences between the TELRIC and TSLRIC methodologies and how or when should the methodologies be applied in the determination of UNE prices?

CLEC POSITION:

There is no evidence in the record to support a contention that the TELRIC and TSLRIC methodologies are materially different or should be applied differently for purposes of determining the matters at issue in this case.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.A.-10

CLECs' Reply Brief: I.A.-1 through I.A.-4

PROPOSED FINDINGS OF FACT

• (not applicable)

PROPOSED CONCLUSIONS OF LAW

• Regardless of whether one is measuring the cost of a service (TSLRIC) or network element (TELRIC), the fundamental economic principles applicable to cost studies remain the same, and the methodology for any forward-looking cost study should be the same.

ISSUE SUMMARIES

ISSUE I.B.2

(2) How should the mark-up for joint and common costs be determined?

CLEC POSITION:

The Commission should determine the mark-up for joint and common costs consistent with the FCC's Order in CC Docket 96-98 (the "FCC Order).¹

The FCC Order contains language addressing both the nature of the joint and common costs to be calculated and the method to be used for allocation. CLEC witness Brad Behounek applied the FCC's principles in recommending a number of adjustments and corrections to Ameritech's joint and common cost model.

Like other state commissions in the Ameritech region, the Commission should adopt Mr. Behounek's reasonable recommendations.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.B.-3 through I.B.-6, I.B.-6 through I.B.-20 & I.B.-28 through I.B.-31.

CLECs' Reply Brief: I.B.- 2 through I.B.-7, I.B.-9, I.B.-10 & I.B.-22.

CLEC TESTIMONY REFERENCES:

See generally Vol. 8, pp. 2837 - 2963 (CLEC witness Behounek, Public);

Vol. 9, p. 2971 - 3023 (CLEC witness Behounek, Confidential). See specifically

Vol. 8, pp. 2844 – 2845, 2896, 2915-2917; Vol. 9, pp. 2981, 2985-2986, 2990-

- The FCC Order states at paragraph 694 that "[b]ecause forward-looking common costs are consistent with our forward-looking, economic cost paradigm, a reasonable measure of such costs shall be included in the prices for interconnection and access to network elements."
- In 47 CFR §51.505(c)(1), the FCC defines forward-looking common costs as "economic costs, efficiently incurred in providing a group of elements or services."
- In paragraph 679, in describing its total element long run economic cost (TELRIC) methodology, the FCC Order states that "[a]dopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market." It continues: "Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels."
- Paragraph 620 of the FCC Order indicates that the states "may set prices to permit recovery of a reasonable share of forward-looking joint and common costs of network elements."
- The FCC Order also points out (at ¶ 678) that "the network elements, as we have defined them, largely correspond to distinct network facilities. Therefore, the amount of joint and common costs that must be allocated among separate offerings is likely to be much smaller using a TELRIC methodology rather than a TSLRIC approach that measures the costs of conventional services."
- With regard to the allocation method to be used for joint and common costs, the FCC Order states at ¶ 696 that "[o]ne reasonable allocation method would be to allocate common costs using a fixed allocator, such as a percentage markup over the directly attributable forward-looking costs."
- The FCC Order at ¶ 696 also states that "[w]e conclude that a second reasonable allocation method would allocate only a relatively small share

- Ameritech Wisconsin submitted in this proceeding a cost study that purports to determine and allocate its joint and common costs.
- As he has done in other regulatory proceedings, CLEC witness Mr. Behounek analyzed Ameritech's joint and common cost study, identified multiple flaws, and recommended specific adjustments and corrections to Ameritech's cost study.

PROPOSED CONCLUSIONS OF LAW

- The FCC Order requires that joint and common costs be attributed to the group of elements causing the costs to be incurred.
- A reasonable measure of forward-looking common costs should be included in the prices for interconnection and access to network elements. *FCC Order*, ¶ 694.
- The FCC defines forward-looking common costs as "economic costs, efficiently incurred in providing a group of elements or services." 47 CFR §51.505(c)(1).
- Adopting a pricing methodology (i.e., TELRIC) based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market. FCC Order, ¶ 679. Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels. Id.
- States may set prices to permit recovery of a reasonable share of forward-looking joint and common costs of network elements. FCC Order, ¶ 620.
- The network elements, as we have defined them, largely correspond to distinct network facilities. Therefore, the amount of joint and common costs that must be allocated among separate offerings is likely to be much smaller using a TELRIC methodology rather than a TSLRIC approach that measures the costs of conventional services. FCC Order, ¶ 678.
- With record to the allegation mostled to be used for inject and assured

basis ensures that the prices of network elements that are least likely to be subject to competition are not artificially inflated by a large allocation of common costs. *Id.*

Ameritech Wisconsin's joint and common cost study does not determine
and allocate its joint and common costs in compliance with the FCC's
Order. CLEC witness Mr. Behounek analyzed Ameritech's joint and
common cost study, identified multiple flaws, and recommended specific
adjustments and corrections to Ameritech's cost study. Mr. Behounek's
adjustments and corrections are reasonable and consistent with the FCC
Order.

ISSUES I.B.2(a) and (b)

- (a) Should Ameritech Wisconsin's (Ameritech) model be used with or without revisions or should some other method be used?
- (b) If Ameritech's model is used:
 - 1. Should product management costs for wholesale products be shared among all products or borne solely by wholesale products? (This includes the relationship between wholesale and retail mark-ups.)
 - a. Should all product management costs for wholesale services be included in the shared and common mark-up or should some be eliminated?
 - 2. Should any other adjustments be made to Ameritech's model, including any of the following?
 - a. Base calculations on a combination of regulated and nonregulated costs?
 - b. Adjust for network growth?
 - c. Reflect increased efficiency based on AT&T percentages?
 - d. Consider part of plant operations administrations and engineering as doubled counted and remove those costs considered to be double counted?
 - e. Eliminate legal and external relation costs?

associated with Ameritech's model, along with Mr. Behounek's recommended adjustments and corrections, are discussed in Mr. Behounek's testimony and in the CLECs' initial and reply briefs, as noted below. The net effect of the flaws in Ameritech's model is to substantially increase Ameritech's joint and common cost mark-up and, ultimately, the rates Ameritech charges CLECs for unbundled network elements. If Ameritech is not ordered to correct its joint and common cost study consistent with Mr. Behounek's recommendations, its study and the results it produces will remain in conflict with FCC orders and rules, and lead to anti-competitive UNE rates.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.B.-6, through I.B.-20.

CLECs' Reply Brief: I.B.- 14 through I.B.-22.

CLEC TESTIMONY REFERENCES:

See generally Vol. 8, pp. 2837 - 2963 (CLEC witness Behounek, Public); Vol. 9, p. 2971 - 3023 (CLEC witness Behounek, Confidential). See specifically Vol. 8, pp. 2850 – 2851; Vol. 9, pp. 2974-2975, 2986-2999 (CLEC witness Behounek).

PROPOSED FINDINGS OF FACT

Ameritech Wisconsin submitted in this proceeding a cost study that purports to determine and allocate its joint and common costs.

- Unlike the "bottom-up" methodology employed in its Long Run Incremental Cost ("LRIC") studies, Ameritech's joint and common cost study represents a "top-down" approach.
- Ameritech's joint and common cost study is based on both regulated and non-regulated cost data. Ameritech only produced LRIC studies for certain regulated services. There are no cost studies for non-regulated services to which parties can look in order to determine that the costs for these services are not also included in the joint and common costs.
- Ameritech offers unregulated services such as Debit Card, Digital Network Channel Terminating Equipment, Enhanced FAX Services, Inside Wire, Incidental InterLATA Services, Payphone Equipment, Professional Services, Protocol Conversion, Sales, Installation and Maintenance of Customer Premises Equipment, Software Sales, Voice Messaging Services, among others. Without LRIC studies for these services, it cannot be determined whether services such as these are excluded from the USOA accounts identified by Ameritech as joint and common.
- Ameritech did not study the above services, among other, unregulated services. Indeed, Ameritech made no attempt to identify whether there are direct costs associated with providing the services that are associated with the accounts that it classifies as "joint and common." Therefore, Mr. Behounek concluded that the most reasonable alternative is for Ameritech to use only the regulated USOA balances found in the ARMIS 43-03 report as the starting point for its joint and common costs study. (See Tr. Vol. 8, p. 2843.)
- The public utility commissions in all Ameritech states credited Mr. Behounek for identifying misallocations and related errors in Ameritech's joint and common cost studies. Those commissions ordered Ameritech to make adjustments and corrections. In Michigan Case No. U-11831, for example, Mr. Behounek made a recommendation to the Michigan Public Service Commission (MPSC) that was substantially the same as that made in this proceeding. Relying on Mr. Behounek's analysis and recommendations, the MPSC rejected Ameritech's joint and common cost study, essentially the same study Ameritech is presenting to the Commission here. (See Tr. Vol. 8, p. 2844). The MPSC adopted a shared

model has a theoretical appeal, but without access to detailed underlying data, it is difficult to guard against the double counting of expenses. The methodology includes all costs in specified accounts in the shared and common cost study unless they are specifically excluded. Without ready access to the underlying data, it is also not possible for the parties to verify that Ameritech Michigan has made the appropriate adjustments for one-time expenses and removed costs that should be assigned to a particular service. Without access to the underlying data, it is also not possible to determine whether costs associated with unregulated and regulated services for which Ameritech Michigan did not perform TSLRIC studies are excluded or included by default. Furthermore, by using actual data, Ameritech Michigan assumes that its current operations are as efficient as a forward-looking approach would yield. The Commission does not assume that there are no further improvements that Ameritech Michigan should make to its current operations. In light of the numerous flaws in the offered study and the lack of an alternative study in this docket, Ameritech Michigan shall continue to use the shared and common cost factors approved in the July 14, 1998 order in Case No. U-11280 and the May 11, 1998 order in Case No. U-11635. Ameritech Michigan's attempt to compare its results to AT&T's costs and the results of the HAI model are unpersuasive because it has failed to show that the comparison is meaningful.²

• In its joint and common cost study, Ameritech attempts to forecast certain expenses in order to determine what its expenses would be in 2001. However, Ameritech does not do this for investment-related expenses. That is, Ameritech's joint and common cost study does not take network growth into account. Ameritech attempts to determine the future replacement cost for its current plant, but does not consider the fact that its plant investment will also increase over time. This results in an understatement of the expenses that comprise the denominator for the joint and common cost mark-up calculation, which, in turn, overstates the joint and common cost mark-up. CLEC witness Mr. Behounek provided a forecast of the expected plant growth from 1998 to 2001 and

Support investment. Using ARMIS data from 1992 through 1999, Mr. Behounek forecast both Land and Support Investment (primarily joint and common costs in Ameritech's study) and non-Land and Support assets (primarily LRIC costs in Ameritech's study). The forecast demonstrated an expected decrease in Land and Support investment from 1998 to 2001 and an expected increase in non-Land and Support investment during the same period. Mr. Behounek's adjustments are calculated at Tr. Vol. 9, pp. 2982-2983.

- Within its joint and common cost study, Ameritech relies on its 1998 investments and expenses without making any adjustment to reflect efficient operations. Ameritech currently operates in a predominately non-competitive environment and has thus not been subjected to the disciplining effect of real competition. Therefore, in order to make Ameritech's shared and common costs reflective of a forward-looking, most-efficient operation, Mr. Behounek employed a 24% reduction in Ameritech's overhead costs. (See, Tr. Vol. 8, p. 2850, 2851.) This 24% reduction is based on the experience of AT&T, a telecommunications company that went from a monopoly to competitive environment.
- Ameritech double counts its Plant Operations Administration (USOA 6534) and Engineering (USOA 6535) expenses. That is, these expenses are found in both the LRIC studies and the joint and common cost study. Mr. Behounek recommends that Ameritech allocate these expenses between the LRIC and joint and common cost pools in the same proportion that Network Administration (another Network Support expense account) is allocated.
- Ameritech allocates Product Support costs between its wholesale and retail operations. CLEC witness Mr. Behounek contends that Ameritech's wholesale operations receive a disproportionate amount of these costs in comparison to retail operations. This allocation results in a Wholesale Factor that is overstated by a substantial amount, as calculated at Tr. Vol. 9, p. 2991. Further, through their requirement that avoided costs be removed when determining wholesale rates, the 1996 Act and the resultant FCC rules recognize that wholesale costs should be lower than retail costs.
- Ameritech includes Legal and External Relations costs in its joint and

PROPOSED CONCLUSIONS OF LAW

- Ameritech Wisconsin's joint and common cost model is flawed and requires certain critical adjustments and corrections to make it consistent with FCC orders and useful in this proceeding.
- Unlike the "bottom-up" methodology employed in its Long Run Incremental Cost ("LRIC") studies, Ameritech's joint and common cost study represents a "top-down" approach that provides little incentive for Ameritech to identify costs that are inappropriate for inclusion in its cost analysis. Ameritech's top-down approach also requires parties to attempt to identify inappropriate costs that are hidden within broad expense categories, which further makes it more likely that these costs will remain among the joint and common costs.
- Ameritech's joint and common cost study is based on both regulated and non-regulated cost data even though Ameritech only produces LRIC studies for regulated services (and actually, only a subset of these).
 Therefore, there are no cost studies for non-regulated services to which parties can look in order to determine that the costs for these services are not also included in the shared and common costs.
- Ameritech's inappropriate use of non-regulated versus the combined regulated/non-regulated USOA data inflates the joint and common cost percentage. Ultimately, FCC rules govern the regulated and non-regulated USOA account data that Ameritech uses. FCC rules also govern the separating of data between regulated and non-regulated services. Further, the FCC requires both direct apportionment of costs and allocations of costs to generate both the total USOA account data and the split between the regulated and non-regulated. Ameritech should use only its regulated expense accounts.
- Ameritech's joint and common cost study neglects to take network
 growth into account. While Ameritech attempts to determine the future
 replacement cost for its current plant it neglects the fact that its plant
 investment will also increase over time. This results in an understatement
 of the expenses that comprise the denominator for the joint and common

expected plant growth from 1998 to 2001 and incorporated it into the study.

- To account for the fact that Ameritech did not adjust for the effects of a growing network, Mr. Behounek proposed adjusting the regulated plant balances by applying a modest percentage decrease for Land and Support investment and applying a modest percentage increase for non-Land and Support investment. Using ARMIS data from 1992 through 1999, Mr. Behounek forecast both Land and Support Investment (primarily joint and common costs in Ameritech's study) and non-Land and Support assets (primarily LRIC costs in Ameritech's study). The forecast demonstrated an expected decrease in Land and Support investment from 1998 to 2001 and an expected increase in non-Land and Support investment during the same period. Mr. Behounek's adjustments, as found at Tr. Vol. 9, pp. 2982-2983, are reasonable.
- Within its joint and common cost study, Ameritech relies on its 1998 investments and expenses without making any adjustment to reflect efficient operations. Ameritech has not made any adjustments in its joint and common cost study to reflect a forward looking, efficient network. Ultimately, Ameritech has made no attempt to demonstrate whether or not the joint and common costs it analyzed result from an efficient operation. Ameritech's study simply is based on the company's existing booked and embedded costs as reported in its ARMIS reports.
- Ameritech currently operates in a predominately non-competitive environment and has thus not been subjected to the disciplining effect of real competition. Therefore, in order to make Ameritech's shared and common costs reflective of a forward-looking, most-efficient operation, Mr. Behounek employed a 24% reduction in Ameritech's overhead costs. (See, Tr. Vol. 8, p. 2850, 2851.) This 24% reduction is based on the experience of AT&T, a telecommunications company that went from a monopoly to competitive environment. This adjustment is reasonable and should be adopted.
- Ameritech double counts its Plant Operations Administration (USOA 6534) and Engineering (USOA 6535) expenses. That is, these expenses are found in both the LRIC studies and the joint and common cost study. Ameritech should allocate these expenses between the LRIC and joint

disproportionate amount of these costs in comparison to retail operations. This skewed allocation results in a Wholesale Factor that is overstated by a substantial amount, as calculated at Tr. Vol. 9, p. 2991. Wholesale services commonly, and by their nature, generate fewer overhead costs (such as product support, sales, marketing, etc.) per unit than their retail counterpart. Therefore, one would expect the Product Support cost to be less per unit for wholesale service versus retail service. Further, through their requirement that avoided costs be removed when determining wholesale rates, the 1996 Act and the resultant FCC rules explicitly recognize that wholesale costs should be lower than retail costs.

- Ameritech improperly includes Legal and External Relations costs in its joint and common costs. CLECs should not be required to underwrite Ameritech's litigation and lobbying efforts against them. Ameritech undoubtedly incurs legal and external relations expense as do the CLECs. The difference is that Ameritech would like to recover its legal costs from the CLECs something the CLECs cannot do from Ameritech. Therefore, Ameritech should remove these inappropriate costs from its joint and common cost pool.
- The public utility commissions in all Ameritech states credited Mr. Behounek for identifying misallocations and related errors in Ameritech's joint and common cost studies. Those commissions ordered Ameritech to make adjustments and corrections. In Michigan Case No. U-11831, for example, Mr. Behounek made a recommendation to the Michigan Public Service Commission (MPSC) that was substantially the same as that made in this proceeding. Relying on Mr. Behounek's analysis and recommendations, the MPSC rejected Ameritech's joint and common cost study, essentially the same study Ameritech is presenting to the Commission here. (See Tr. Vol. 8, p. 2844.) The MPSC adopted a shared and common cost percentage that is nearly the same as the one that Mr. Behounek proposes in this proceeding.
- The CLECs' recommendation that the Commission should set Ameritech's joint and common cost mark-up at **[the percentage calculated at Tr. Vol. 11, p. 4349, Exh. 69]** is reasonable and supported by the record and FCC orders. Ameritech Wisconsin's proposed joint and common cost mark-up, which is nearly three times larger than the CLECs', is unreasonable and not supported by the record or FCC orders.

not prove the nature and magnitude of its forward-looking shared and common costs. CLEC witness Brad Behounek's adjustments to Ameritech's study are fair, necessary, and well-documented.

ISSUES I.B.(3) and (4)

- (3) Over what base should the following categories of costs be allocated?
 - (a) Network Operations
 - (b) General Operations
 - (c) Corporate Operations
- (4) How should Joint and Common costs be assigned to the different elements?

CLEC POSITION:

The CLECs did not submit an independent joint and common cost study. The CLECs' witness Mr. Behounek analyzed Ameritech Wisconsin's joint and common cost study and made specific adjustments and corrections to help bring Ameritech's study into compliance with FCC orders and rules. Concerning the base over which Network Operations, General Operations, and Corporate Operations costs should be allocated, the Commission should use Ameritech's model with the specific adjustments recommended by Mr. Behounek. Similarly, the joint and common costs should be assigned to the different elements based on Mr. Behounek's recommended adjustments to Ameritech's study. *See* Proposed Findings of Fact and Conclusions of Law related to Issues I.B.2(a) and (b), above.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.B.-3 through I.B.-6 & I.B.-19 through I.B.-20.

CLECs' Reply Brief: I.B.- 1 through I.B.-22.

CLEC TESTIMONY REFERENCES:

See generally Vol. 8, pp. 2837 - 2963 (CLEC witness Behounek, Public); Vol. 9, p. 2971 - 3023 (CLEC witness Behounek, Confidential). See specifically

Vol. 8, pp. 2854 - 2864 (CLEC witness Behounek).

PROPOSED FINDINGS OF FACT

• See Proposed Findings of Fact related to Issues I.B.2(a) and (b), above.

PROPOSED CONCLUSIONS OF LAW

• See Proposed Conclusions of Law related to Issues I.B.2(a) and (b), above.

ISSUE SUMMARIES

ISSUE I(C)(1) - What factors should the Commission consider when determining whether or not the loop rates and subloop rates proposed by Ameritech are reasonable?

CLEC POSITION:

- The Commission must address and consider the economic realities in setting loop rates in this matter. The Commission's duties go beyond merely mathematical application of cost models, but rather the Commission has an independent duty to determine that rates arrived at are "just and reasonable."
- In addition to the adjustments to the loop cost study that are directly referenced in the specific items on the issues list related to fill factors, maintenance factors, costs for loop electronics, installation factors, depreciation lives and use of IDLC technology, Ameritech improperly includes certain expenses categorized as "other expenses" within its unbundled loop cost study. To the extent the Commission determines to allow Ameritech to recover these one time startup expenses through the recurring charges, it should require Ameritech to revise its loop cost study to properly demonstrate when the costs will be fully recovered and then to remove the costs from the study at that

Ameritech should also not be permitted to use assumptions of heavier gauge,
 more expensive cables in its cost study.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-7 through 16, I.C.-39, I.C.-40, I.C.-40, and I.C.-41.

CLEC TESTIMONY REFERENCES:

- See Vol. 10, pp. 4321-32 (Butman Rebuttal).
- See Vol. 10, pp. 3489-99 (McPeak Rebuttal).
- See Vol. 10, pp. 3505-38 (Morrison Rebuttal).
- See Vol. 10, pp. 3520-38 (Morrison Surrebuttal).
- See Vol. 10, pp. 4232-47 (Jackson Rebuttal).
- See Vol. 10, pp. 4251-59 (Jackson Surrebuttal).
- See Vol. 10, pp. 4293-4300 (Jennings Rebuttal).
- See Vol. 10, pp. 4302-05 (Flood Rebuttal).
- See Vol. 10, pp. 4344-47 (Smith Surrebuttal).
- See Vol. 10, pp. 4124-25; 4135-4185 (Stacy Rebuttal).
- See Vol. 10, pp. 4187-4205 (Stacy Surrebuttal).
- See Vol. 8, pp. 3163-70, 3183-3200, Vol. 9, pp. 3461, 3464-3471 (confidential record) (Starkey Surrebuttal).

- UNE prices that are set too high will result in sound business decisions by CLECs to exit the competitive market in Wisconsin.
- There is not sufficient competition in the local telephone market in Wisconsin today.
- Ameritech was required by the SBC/Ameritech merger conditions to offer up to 64,000 UNE loops at a discount. Ameritech further was required to report when 50% of that total had been ordered. Ameritech has yet to announce that 50% of the loops have been ordered.
- In the recent past Ameritech has filed cost studies related to UNE loops in the four other states in the Ameritech region as shown in the following table:

COMPARISON OF BASIC BUSINESS / RESIDENCE UNBUNDLED LOOPS 2-Wire Interface Loop Basic

Ameritech State (Rate Group)	Currently Approved	Ameritech WI Proposal	% Difference (WI / other)	Source
ILLINOIS				
Rate Group 1	\$2.59	\$31.78	1227.03%	note 1
Rate Group 2	\$7.07	\$36.30	513.44%	note 1
Rate Group 3	\$11.40	\$45.97	403.25%	note 1
INDIANA				
Rate Group 1	\$8.03	\$31.78	395.77%	note 2
Rate Group 2	\$8.15	\$36.30	445.40%	note 2
Rate Group 3	\$8.99	\$45.97	511.35%	note 2
MICHIGAN				
Rate Group 1	\$8.47	\$31.78	375.21%	note 3
Rate Group 2	\$8.73	\$36.30	415.81%	note 3
Rate Group 3	\$12.54	\$45.97	366.59%	note 3
OHIO				
Rate Group 1	\$5.93	\$31.78	535.92%	note 4
Rate Group 2	\$7.97	\$36.30	455.46%	note 4
Rate Group 3	\$9.52	\$45.97	482.88%	note 4

note 1: ILL. C.C. No. 20, Part 19, Section 2, 2nd Revised Sheet, No. 7

note 2: Ameritech IN Compliance Filing, Cause No. 40611, UNE Tariff Rate Summary, Sept. 15, 2000.

note 3: M.P.S.C. No. 20R, Part 19, Section 2, 7th Revised Sheet, No. 7

note 4: P.U.C.O No. 20, Part 19, Section 2, Original Sheet, No. 38

• In each of the TELRIC proceedings in other states, the state commissions

- Ameritech includes certain expenses categorized as "other expenses" within its unbundled loop cost study. These "other expenses" add an additional 5 cents per month per loop to the costs Ameritech attempts to charge. As indicated by Ameritech's cost study, these costs are primarily from the following activities: billing system reprogramming, the development of methods and procedures, and integrated testing.
- These expenses are one-time start up expenses that were incurred well in the past by Ameritech as it attempted (quite unsuccessfully as history has shown) to prepare itself to meet its obligations under the Telecommunications Act.
- Some of these charges do not properly relate to the UNE loops. For example, a large portion of the costs apparently relate to Ameritech's revisions to its CABS billing system. The CABS system is not used to bill for unbundled loops. (Tr. Vol. 9, p. 3471).
- Use of heavier gauge cable was more prevalent when the facilities consisted entirely of copper.
- Now that network facilities consist of a mix of fiber and copper, the copper runs are decreasing in length, and thus the need for the heavier gauge cable is significantly reduced.
- Ameritech has indicated that one of the primary goals of its Project Pronto initiative is to increase the amount of fiber, push the fiber deeper into the neighborhoods and therefore reduce the length of copper cable needed to provide service.
- Further, advances in other technologies such as filled cables and more efficient splicing apparatus has reduced the need for heavier gauge cable in forward looking networks.

PROPOSED CONCLUSIONS OF LAW:

• This Commission must ensure that UNEs are provided on "rates, terms, and conditions that are just, reasonable, and nondiscriminatory." (47

Ameritech overstates the maintenance factors, and uses unreasonable shared and common cost factors to further inflate the results of its unbundled loop study.

Ameritech grossly overstates the material price inputs for DLC technology which will be used in its network.

Ameritech improperly adds "inplant" factors which represent an improper double recovery of costs of installation of its DLC equipment, since the vendor contract clearly provides that all DLC equipment is furnished and installed and fully ready.

Ameritech has added a number of miscellaneous expenses and adjustments that serve to inflate its results of its unbundled loop cost study. These additional expenses are not supportable and should be removed.

Ameritech has improperly assumed a heavier gauge, more expensive cable.

Ameritech has not used the FCC-mandated economic lives for pricing UNEs.

Ameritech assumes that all UNE loops must be provisioned using an inefficient UDLC technology, while it reserves to its own retail customers the use of the much more efficient and less costly IDLC technology. Separate but unequal networks, an efficient forward looking network for Ameritech's own customers, and an inefficient outdated network for its competitors, is discriminatory.

• The factual findings above make the use of the 26 gauge cable, as previously used in Ameritech's cost studies in other states, the more reasonable assumption. For these reasons the Commission requires Ameritech to replace the assumptions of heavier gauge cable in its cost study with the use of the 26 gauge cable as proposed in other states.

ISSUE I(C)(2) - How should loop cost and subloop cost inputs be calculated?

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-7 through I.C.-16, I.C.-39, I..-40, I.C.-41.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3032-76, Vol. 9, pp. 3321-3365 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3162-207, Vol. 9, pp. 3461-3473 (confidential record) (Starkey Surrebuttal).
- See Vol. 10, pp. 4136-85 (Stacy Rebuttal).
- See Vol. 10, pp. 4187-205 (Stacy Surrebuttal).
- See Vol. 10, pp. 4321-23, 4334 (Butman Rebuttal).
- See Vol. 10, pp. 3499-500 (McPeak Rebuttal).
- See Vol. 10, p. 3512 (Morris Rebuttal).

PROPOSED FINDINGS OF FACT:

• See below.

PROPOSED CONCLUSIONS OF LAW:

• See below. Also see discussion of Issue I.A above.

ISSUE I(C)(2)(a) - What fill factors should be used for the following portions

of the loop?

• The following fill factors should be used:

LOOP FEEDER COPPER	75%
LOOP FEEDER FIBER	67%
DLC ELECTRONICS	90%
COPPER DISTRIBUTION	70%

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-7 through I.C.-16, I.C.-16 through I.C.-18.
- CLEC Reply Brief: I.C.-2 through I.C.-8.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3035-3050, Vol. 9, pp. 3324-3339 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3170-83, Vol. 9, pp. 3462-3463 (confidential record) (Starkey Surrebuttal).

- The fill factors proposed by Ameritech Wisconsin are much lower than those actually approved for Ameritech by any commission in any proceeding to date.
- The fill factors proposed by Ameritech are actual fills, not forward looking fills. Ameritech's proposed fill factors are not supported by the record because:

The fact that total usage of the components has been stable over a number of years does not mean it will continue to be stable in the future, and usage is likely to rise with competition.

The same economic and technological factors which drove fill factor levels in the past will not continue to drive it in the future and technological advances will likely increase the usage of facilities.

- The fill factors proposed by the CLECs in this matter closely match those approved by other state commissions.
- The fill factors proposed by the CLECs in this matter closely match the fill factors proposed by Ameritech, and adopted by the FCC, in a recent proceeding.

PROPOSED CONCLUSIONS OF LAW:

- The fill factors ordered by the Commission comply with the requirements of the Act in that they provide for UNE rates that are just, reasonable, and nondiscriminatory.
- The fill factors ordered by the Commission comply with Paragraph 682 of the FCC First Report and Order in that they are "reasonably accurate fill factors" (estimates of the proportion of a facility that will be "filled" with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element.
- The use of embedded costs has been specifically rejected by the FCC.

ISSUE I(C)(2)(b) - What maintenance factor should be used for loop and

subloop plant?

CLEC POSITION:

• The CLEC's recommended adjustments for Ameritech Wisconsin's

the 1996 and 1997 data of which it is composed. Ameritech overstates inflation, which has been hovering between 0-2% and does not take into consideration productivity improvements. Therefore, the CLECs recommend that the 5.6% be replaced by 0% (2% inflation offset by 2% productivity increase).

Contrary to Ameritech's actual trends in expense to investment trends (which are decreasing), Ameritech proposes factors that only increase over time. Instead of using Ameritech's proposed 2001 maintenance factors, it should adjust its 1998 factors downward by 6.55% (2.1385%, which is based on Ameritech's current trends, compounded over 3 years).

Ameritech includes the maintenance and repair expenses associated with

equipment that is beyond its economic life in its maintenance factor calculations. Therefore, since the oldest equipment generally generates proportionately more maintenance expenses, the CLECs recommend that Ameritech reduce its maintenance factors by the portion of the plant type that is beyond its economic life as set forth in the following table:

Plant Type	Portion Fully Depreciated	
Digital Switching	2.07%	
Digital Circuit Equipment	17.02%	

Underground Cable Metallic	40.36%	
Buried Cable Non-Metallic	0.00%	
Buried Cable Metallic	16.90%	
Intra-Building Cable Non-Metallic	0.00%	
Intra-Building Cable Metallic	16.4%	

Ameritech should be directed to use these modified maintenance factors in its cost studies at the conclusion of this docket.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-7 through I.C.-16, I.C.-18 through I.C.-31.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, p. 3035, Vol. 9, p. 3324 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3151-52, Vol. 9, pp. 3445-46 (confidential record) (Starkey Rebuttal).
- See Vol. 10, p. 4189 (Stacy Rebuttal).

- Ameritech Wisconsin's maintenance and repair expense to investment has been generally declining over time.
- The rate of inflation during the period of time related to the calculation of the maintenance factors has been between 0 and 2%.

reduce its maintenance factors, after all the adjustments ordered earlier, by the portion of the plant type that is beyond its economic life.

ISSUE I(C)(2)(c) — What prices should be used for loop electronics? CLEC POSITION:

• The prices in Ameritech's studies for loop electronics, particularly DLC equipment, should be reduced by applying an effective discount of 16.02% off of the prices proposed as inputs by Ameritech. This is based on a calculation in the confidential testimony that applies only two of the numerous discounts available in the contracts under which Ameritech purchases DLC equipment.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-2 through I.C.-7, I.C.-16, I.C.-1 through I.C.-38.
- CLEC Reply Brief: I.C.-8 through I.C.-9.

CLEC TESTIMONY REFERENCES:

 See Vol. 8, pp. 3065-3076, Vol. 6, pp. 3354-65 (confidential record) (Starkey Rebuttal).

- The current contract for DLC equipment contains a term discount. The full amount of this discount will likely be achieved by Ameritech during the time applicable to this cost study.
- The current SBC contract for DLC equipment contains a volume discount.

PROPOSED CONCLUSIONS OF LAW:

- TELRIC principles require that Ameritech use the current contracts in place to determine price inputs for any equipment or services in its cost studies.
- Use of the 16.02% adjustment is a reasonable application of TELRIC principles in this instance.

ISSUE I(C)(2)(d) -What installation factors should be used?

CLEC POSITION:

• Ameritech improperly includes "in plant" factors which result in a double recovery of the costs of installation of the DLC equipment.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-7 through I.C.-16, I.C.-38 through I.C.-39.
- CLEC Reply Brief: I.C.-9 through I.C.-10.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3071-76, Vol. 9, pp. 3360-3365 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3165, 3183-94, Vol. 9, pp. 3461, 3464-69 (confidential record)
 (Starkey Surrebuttal).
- See Vol. 10, pp. 4172-77 (Stacy Rebuttal).

- Ameritech's cost study applies a markup of 8.24% for "telco engineering" and "telco installation" to each piece of equipment purchased by Ameritech under this contract.
- On page 60 of its brief, Ameritech admits that it adds the costs of maintenance to "in plant" factors. This is a double recovery since Ameritech also applies a maintenance factor to cover such costs. Also, the contract for the loop electronics already includes 100 percent of the cost of installation.

PROPOSED CONCLUSIONS OF LAW:

• The contract clause above is interpreted such that the additional charges for "telco engineering" and "telco installation" of the equipment are improper.

ISSUE I(C)(2)(e) – What inventory factors should be used?

CLEC POSITION:

CLECs do not separately address the topic "inventory factors" as this
essentially is only a subset of fill factors. CLECs have addressed the fill factor
issue as noted above.

CLEC BRIEF REFERENCES:

- CLEC Initial Reply Brief: I.C.-7 through I.C.-16, I.C.-38 through I.C.-39.
- CLEC Reply Brief: I.C.-9 through I.C.-10.

CLEC TESTIMONY REFERENCES:

• See issue above.

ISSUE I(C)(2)(f) – What fiber/copper cross over point should be used? CLEC POSITION:

 The CLECs have not specifically addressed issues related to fiber copper cross-over point. CLECs at present have not indicated specific adjustments to these factors as they are currently a de minimus portion of the over statement of Ameritech's costs.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-3.

V

CLEC TESTIMONY REFERENCES:

• Not applicable.

PROPOSED FINDINGS OF FACT:

• Not applicable.

PROPOSED CONCLUSIONS OF LAW:

• Not applicable.

ISSUE I(C)(2)(g) - What relative proportions of aerial, underground and

buried cable should be used?

CLEC POSITION:

• The CLECs have not specifically addressed issues related to proportions of

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-3.

CLEC TESTIMONY REFERENCES:

• Not applicable.

PROPOSED FINDINGS OF FACT:

• Not applicable.

PROPOSED CONCLUSIONS OF LAW:

• Not applicable.

ISSUE I(C)(2)(h) - How should pole and conduit costs be allocated to

Ameritech, CLECs and to third parties?

CLEC POSITION:

The CLECs have not specifically addressed issues related to pole and conduit costs. CLECs at present have not indicated specific adjustments to these factors as they are currently a de minimus portion of the over statement of Ameritech's costs.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-3.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3198-3200, Vol. 9, p. 3471 (confidential record) (Starkey Rebuttal).
- See Vol. 10, pp. 4174-76 (Stacy Rebuttal).

PROPOSED FINDINGS OF FACT:

• Not applicable.

PROPOSED CONCLUSIONS OF LAW:

• Not applicable.

ISSUE I(C)(2)(i) —What depreciation lives and salvage values should be used? CLEC POSITION:

 Because the FCC mandated use of specific FCC-approved economic lives in its universal service fund proceeding, those same economic lives should be used with respect to the pricing of unbundled network elements.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-3, I.C.-41 through I.C.-43.

CLEC TESTIMONY REFERENCES:

• See Vol. 8, p. 3043, Vol. 9, p. 3322 (confidential record) (Starkey Rebuttal).

V

- See Vol. 8, p. 3216 (Starkey Surrebuttal).
- See Vol. 10, pp. 4172-77 (Stacy Rebuttal).

- The methodology for determining universal service support and the methodology for determining costs of unbundled network elements should be consistent. (Report and Order, *In the Matter of Federal-State Joint Board on Universal Service*, May 8, 1997, CC Docket No. 96-45, ¶ 251. See also November 12, 1997 Public Notice in DA 97-2383.)
- In ¶ 250 of its May 8, 1997 Report and Order, the FCC mandated use of certain criteria in determining forward-looking economic costs of providing universal service. One of which was "economic lives and future net salvage percentages used in calculating depreciation expenses must be within the FCC authorized range."
- The two FCC directives noted above dictate that the same FCC mandated economic lives and future net salvage percentages for the UNE cost study as is used for the Universal Service Fund.

ISSUE I(C)(2)(j)(1)(2) — How should loop cost calculations integrate a mix of copper and fiber plant and Digital Loop Carrier (DLC) technology? What proportion of DLC should be used in the cost calculations? What proportion of Universal Digital Loop Carrier (UDLC) versus Integrated Digital Loop Carrier (IDLC) should be used?

CLEC POSITION:

 Ameritech's studies should assume the use of IDLC technology on a nondiscriminatory basis for the provisioning of UNE loops.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-7 through I.C.-16.

• See Vol. 8, pp. 3183-3207, Vol. 9, pp. 3464-73 (confidential record) (Starkey Surrebuttal).

PROPOSED FINDINGS OF FACT:

- IDLC is the most efficient forward-looking technology.
- IDLC is the technology Ameritech uses in cost studies for its retail services.
- IDLC is the technology Ameritech is actually using on a going-forward basis to provision service to its own end users.
- IDLC is the most technologically advanced method of provision service to end users.

PROPOSED CONCLUSIONS OF LAW:

• Ameritech's attempt to require the use of UDLC for UNE loops results in rates that are unjust and discriminatory in violation of 47 U.S.C. 251 and 252.

ISSUE I(C)(3)(a) – Are there costs incurred by Ameritech to modify its OSS to implement the unbundling of the HFPL? If so, what is the appropriate price that Ameritech should charge to recover the costs of modifying its OSS to implement the unbundling of the HFPL?

CLEC POSITION:

 Ameritech's charges for modifications to OSS systems are unsupported and therefore Ameritech should not be allowed to charge CLECs any amount for recovery of costs of modifying OSS systems. Ameritech has failed to are any costs, these will already be recovered in the shared and common costs pool.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-57 through I.C.-60.

CLEC TESTIMONY REFERENCES:

- See Vol. 6, pp. 2148-67, 2178-81, Vol. 9, pp. 2447-66, 2477-80 (confidential record) (Ankum Direct).
- See Vol. 8, pp. 2746-48 (Idoux Rebuttal).

PROPOSED FINDINGS OF FACT:

- Ameritech's Line Sharing HFPL study identifies an undifferentiated figure of \$28,000,000.00 for "Telcordia Software/OSS Upgrade Costs." No further detail about the composition of this figure is provided in the record.
- Ameritech's testimony only states that Ameritech obtained a quote from one vendor. The quote itself was not provided.
- There is no evidence in the record as to what the scope of the service was to be, or whether or not this service ever was actually performed.
- SBC and Ameritech are providing xDSL services themselves.
- OSS systems already are being used for SBC's xDSL services.

PROPOSED CONCLUSIONS OF LAW:

• The figures are entirely without explanation and do not constitute a sufficient record on which to base any charge by Ameritech.

Ameritech Wisconsin charge for the nonrecurring and recurring costs

applicable to the HFPL UNE?

CLEC POSITION:

The recurring charge for the high frequency portion of the loop should be zero.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-60 through I.C.-68.

CLEC TESTIMONY REFERENCES:

- See Vol. 10, pp. 4303-05 (Flood Rebuttal).
- See Vol. 6, pp. 2155-67, Vol. 9, pp. 2454-66 (confidential record) (Ankum Direct).
- See Vol. 6, pp. 2313-22 (Ankum Surrebuttal).
- See Vol. 10, pp. 3505-16 (Morrison Rebuttal).
- See Vol. 8, pp. 2746-48 (Idoux Rebuttal).

PROPOSED FINDINGS OF FACT:

- SBC's FCC filings in support of its DSL tariffs show it has no loop cost, and thus no HFPL cost, in providing that service to itself.
- There is no incremental cost to Ameritech when the HFPL is used to provide DSL service.
- The addition of line sharing to the existing, in-service loop cannot, by definition, cause any portion of the loop cost

• Ameritech's witness stated that the only support for the HFPL is the cost study for the UNE loop, divided by two.

PROPOSED CONCLUSIONS OF LAW:

- Ameritech may only unbundle the HFPL where Ameritech is the voice service provider to the end user.
- The commissions in Texas, Kansas, Illinois, New York and Minnesota ordered the ILEC to adopt a zero recurring charge for the HFPL.
- FCC rules strictly prohibit consideration of opportunity cost in pricing UNEs.
- Ameritech is only entitled to recoup the cost of providing a network element.
- Where the incremental cost of providing an element is zero, TELRIC principles, the Act and the FCC rules provide that Ameritech may not recover more than its cost, and therefore the charge to a CLEC must also be zero.

ISSUE I(C)(3)(d) - Should line sharing be required if a portion of the loop

uses fiber?

CLEC POSITION:

 Ameritech should be required to provide line sharing over the Project Pronto architecture.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-3, I.C.-68 through I.C.-73.



CLEC TESTIMONY REFERENCES:

- See Vol. 10, pp. 4303-05 (Flood Rebuttal).
- See Vol. 8, pp. 2743-48 (Idoux Rebuttal).
- See Vol. 8, pp. 2770-73 (Idoux Surrebuttal).
- See Vol. 6, p. 2153, Vol. 9, p. 2452 (confidential record) (Ankum Direct).

PROPOSED FINDINGS OF FACT:

- Line sharing is technically feasible on DLC loops.
- Ameritech provides access to unbundled network elements that exhibit a lack of "one-to-one correspondence" and "end-to-end path." For example, Ameritech currently offers CLECs access to basic, unbundled POTS loops that utilize Litespan DLC technology very similar to the technology that will power Project Pronto. From the Litespan remote terminal to the central office where the CLEC is collocated, the unbundled loop is nothing more than a derived circuit sharing a number of "time slots" with other circuits/data in a common SONET bitstream (the SONET transmission facility connects the Litespan RT with a Litespan COT in the central office generally at an OC3 level). In such a scenario, there is no way to separately identify a given unbundled loop within the greater SONET bitstream or to point to any physical facility that constitutes that single loop.

PROPOSED CONCLUSIONS OF LAW:

- The FCC's *Line Sharing Order* requires that Ameritech provide for line sharing on DLC loops including those that would be provided pursuant to Project Pronto.
- In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability in CC Docket No. 98-147 (Released January 19, 2001) ("Advanced Services Reconsideration"), the FCC stated:
 - 10. We clarify that the requirement to provide line sharing applies to the entire loop, even where the incumbent has deployed fiber in the loop (e.g. where the loop is

required to unbundle the high frequency portion of the local loop even where the incumbent LEC's voice customer is served by DLC facilities. The local loop is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end user customer premises, including inside wire owned by the incumbent LEC. By using the word "transmission facility" rather than "copper" or "fiber," we specifically intended to ensure that this definition was technology-neutral. The "high frequency portion of the loop" is defined as the frequency range above the voiceband on a copper loop facility that is being used to carry analog circuit-switched voiceband transmissions. Thus, although the high frequency portion of the loop network element is limited by technology, i.e., is only available on a copper loop facility, access to that network element is not limited to the copper loop facility itself. When we concluded in the Line Sharing Order that incumbents must provide unbundled access to the high frequency portion of the loop at the remote terminal as well as the central office, we did not intend to limit competitive LECs' access to fiber feeder subloops for line sharing.¹

- Ameritech must, in order to comply with the FCC's orders, allow carriers access not only to the unbundled copper subloop for purposes of line sharing (by collocating a DSLAM and splitter at the remote terminal), but also to the fiber feeder portion of the loop; regardless of whether the loop (i.e., the "transmission facility") is somehow a Project Pronto facility or not.
- Under the broad definitions provided by both the Congress and the FCC, a network element does not need to be recognizable, or identifiable as a physical facility, at all times and in all circumstances before it can be unbundled.²

- (e) Assuming that the AT&T/Ameritech Arbitration award (05-MA-120) as adopted in the stipulation in the OSS case (6720-TI-160) requires Ameritech to make line splitters available:
- 1. How should Ameritech be required to make line splitters available, e.g., on a line-at-a-time, a shelf-at-a-time, or other basis?

 CLEC POSITION:

The Commission should require Ameritech Wisconsin to make line splitters available on any requested basis, whether line-at-a-time, shelf-at-a-time, or some other requested basis.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.C.-73 through I.C.-75

CLECs' Reply Brief: I.C.-13 through I.C.-18

CLEC TESTIMONY REFERENCES:

GENERAL TESTIMONY:

The CLECs address line splitters generally throughout the testimony at Tr. Vol. 6, pp. 2196-2214; 2297-2307, and the corresponding confidential testimony (Tr. Vol. 9, pp. 2575-93; 2677-87). Subsequent discussion of line splitters will include references only to specific testimony relating to the particular issue from

PROPOSED FINDINGS OF FACT

- There is no technical reason for denying CLECs the right to use Ameritech's line splitters.
- All carriers would benefit from CLECs having access to Ameritech's line splitters when line sharing, since this would reduce CLECs' capital requirements for local entry, and allay Ameritech's concerns regarding unused and stranded equipment, as well as allowing Ameritech to earn additional revenues.
- Requiring Ameritech to offer line splitters to CLECs engaging in line sharing would avoid the unnecessary duplication of facilities that would otherwise occur, and would promote local competition.

PROPOSED CONCLUSIONS OF LAW

- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120, as adopted in the stipulation in the OSS Docket (6720-TI-160) requires Ameritech to make line splitters available to CLECs. (Award at 79-80).
- Ameritech must provide splitters to CLECs on any requested basis, including a shelf-at-a-time basis, and not merely on a line-at-a-time basis, as proposed by Ameritech.

ISSUES I.C.(3)(e)2 and 2.a

- 2. Should Ameritech be required to provide nondiscriminatory access, at just and reasonable rates, to its OSS systems to support line splitter availability?
 - a. If so, how should the cost be determined?

CLEC POSITION:

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.C.-75 through I.C.-76

CLECs' Reply Brief: I.C.-18 through I.C.-19

CLEC TESTIMONY REFERENCES:

The CLECs presented legal argument on this issue rather than witness testimony, arguing that the AT&T/Ameritech Wisconsin arbitration award ("Award") plainly required Ameritech to provide OSS systems that could support the provisioning of line splitters. (See Award at 85) ("Since the panel has ordered that Ameritech provide line splitting both as a UNE and as ancillary equipment to provide the functionalities inherent in unbundled loops, it must also provide the OSS systems that support such requests.").

PROPOSED FINDINGS OF FACT

(not applicable)

PROPOSED CONCLUSIONS OF LAW

- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120, as adopted in the stipulation in the OSS Docket (6720-TI-160) requires Ameritech to make line splitters available to CLECs. (Award at 79-80).
- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120 requires Ameritech to provide CLECs with OSS systems that support its provisioning of line splitting both as a UNE and as ancillary equipment to provide the functionalities inherent in unbundled loops. (Award at 85).

- (f) Assuming that the AT&T/Ameritech Arbitration award (05-MA-120) as adopted in the stipulation in the OSS case (6720-TI-160) requires Ameritech to provide line splitting over UNE-P:
- 1. Should Ameritech be required to provide its line splitters to CLECs under UNE-P arrangements?

CLEC POSITION:

The Commission should require Ameritech to provide line splitting over UNE-P.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.C.-76

CLECs' Reply Brief: I.C.-20 through I.C.-21

CLEC TESTIMONY REFERENCES:

The CLECs presented legal argument on this issue rather than witness testimony, arguing that not only did the AT&T/Ameritech Arbitration Award require Ameritech to provide line splitting over UNE-P (see Award at 80), but that contrary to Ameritech's contention, applicable federal authorities require it to provide line splitting over UNE-P. See In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147,

for Authorization to Provide In-Region, InterLATA Services in Massachusetts, CC

Docket 01-9, Memorandum Opinion and Order, April 16, 2001.

PROPOSED FINDINGS OF FACT

(not applicable)

PROPOSED CONCLUSIONS OF LAW

- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120, as adopted in the stipulation in the OSS Docket (6720-TI-160) requires Ameritech to make line splitters available to CLECs. (Award at 79-80).
- The AT&T/Ameritech Arbitration Award requires Ameritech to provide line-splitting over UNE-P. (Award at 80).
- Applicable federal authorities require Ameritech to provide line-splitting over UNE-P. (See In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147, FCC 01-26, Third Report and Order on Reconsideration, January 19, 2001; In the Matter of Application of Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance) NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions) And Verizon Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in Massachusetts, CC Docket 01-9, Memorandum Opinion and Order, April 16, 2001.).

ISSUE I.C.(3)(f)2

2. Where should splitters be placed?

CLEC POSITION:

The Commission should order Ameritech to place line splitters on the basis

of engineering efficiency.

CLEC TESTIMONY REFERENCES:

The CLECs urged the Commission to disregard Ameritech's claims that placing the splitters on the MDF would lead to frame exhaust. In support, the CLECs referenced the finding of the AT&T/Ameritech arbitration panel that the key driver of splitter placement is the splitter's ultimate use (see Award at 80-81), and noted that both the CLEC and Ameritech testimony in this docket demonstrated that Ameritech's assertions that MDF-mounted splitters cannot be efficiently repaired and maintained are unfounded. Specifically, both Mark Welch of Ameritech and CLEC witness Sidney Morrison testified that US West has implemented precisely the MDF-based splitters advocated by the CLECs, dispelling doubt that such splitters are difficult to maintain. (See Tr. Vol. 3, p. 267 (Welch); Tr. Vol. 10, p. 3513 (Morrison)). The CLECs also noted that MDFmounted splitters promote efficiencies in that they reduce the need for running jumper cables, take up less floor space than rack-mounted splitters, and are the least-cost technology.

PROPOSED FINDINGS OF FACT

- The key driver of splitter placement is the splitter's ultimate use.
- Ameritech's assertions that MDF-mounted splitters cannot be efficiently repaired and maintained are unfounded.

- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120, as adopted in the stipulation in the OSS Docket (6720-TI-160) requires Ameritech to make line splitters available to CLECs. (Award at 79-80).
- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120 requires Ameritech to place line splitters on the basis of engineering efficiency, including the MDF. (Award at 80-81).

ISSUE I.C.(3)(g)

(g) How should the cost of line splitters and placement be determined?

CLEC POSITION:

The Commission should require Ameritech to price line splitters as UNEs at TELRIC rates as adjusted by CLEC coalition witness Dr. Ankum.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.C.-77 through I.C.-78

CLECs' Reply Brief: I.C.-23 through I.C.-24

CLEC TESTIMONY REFERENCES:

See Vol. 6, pp. 2196-2210 (CLEC witness Ankum); Vol. 9, pp. 2582-90***

(Ankum); Ex. 61*** (Ankum); Vol. 2, p. 676 (Ameritech witness Palmer).

PROPOSED FINDINGS OF FACT

• Ameritech has overstated the costs of providing line splitters to CLECs who engage in line sharing by using inflated time estimates for running jumper

- Requiring Ameritech to make the CLEC-proposed adjustments to its line-splitting cost studies will result in splitter costs that reflect proper time estimates, efficient technologies, appropriate installation factors, reasonable fill factors and appropriate, TELRIC-based rates.
- Ameritech does not challenge the use of TELRIC pricing for UNEs.

PROPOSED CONCLUSIONS OF LAW

- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120, as adopted in the stipulation in the OSS Docket (6720-TI-160) requires Ameritech to make line splitters available to CLECs. (Award at 79-80).
- The FCC's Local Competition Order (In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 (Aug. 8, 1996) mandates the use of TELRIC principles to develop cost studies and to set prices for UNEs.
- The AT&T/Ameritech Arbitration Award in Docket 05-MA-120 held that line splitters are UNEs. (Award at 80).
- Therefore, line splitters should be priced at their applicable TELRIC.

ISSUE I(C)(4) – What subloop elements should be provided and what subloop elements must be priced?

CLEC POSITION:

• The CLECs propose that Ameritech be required to make all subloop elements available as required by the FCC's UNE Remand Order. Further, the CLECs have identified a number of additional specific subloop elements which are

required related to unbundling of advanced services including Project Pronto

- that allow CLECs to efficiently serve customers, and must price such subloops according to the same principles as UNE loops.
- The Commission should find that a carrier using the Project Pronto architecture to provide data services to a customer using Ameritech's voice service is "line sharing."
- Ameritech must unbundle and provide subloops in MDU and campus environments.
- Ameritech's subloop cost study is flawed, and must be subject to the same adjustments as set forth in the section concerning loops above.
- Finally, as described in detail above, Ameritech should be required to unbundle its Project Pronto architecture and provide cost support for individual network elements within the architecture. Ameritech's Broadband Service cost studies do not provide cost support consistent with this approach. As a result, the Commission should direct Ameritech to file cost studies supporting at least the following unbundled network elements:
 - (a) permanent virtual circuits ("PVCs"); (b) permanent virtual paths

 ("PVPs"); and (c) time-division-multiplexed ("TDM") circuits available for

 transport between the RT and OCD. Costs specific to PVCs and PVPs

Rate, Variable Bit Rate – real time, Variable Bit Rate – not real time, and Unspecified Bit Rate;

collocation of a CLEC owned "plug-in" card within an Ameritech remote terminal; and,

incremental costs specific only to the data requirements of a "Line Shared" loop using the Project Pronto architecture (consistent with the description above).

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-4, I.C.-79 through I.C.-82.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3050-64, 3092-3131, Vol. 9, pp. 3324-53 (confidential record),
 pp. 3387-3425 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 2718, 2723 (Idoux Rebuttal).

PROPOSED FINDINGS OF FACT:

- Ameritech's subloop cost study relies upon many of the same, unreasonable assumptions as its UNE loop cost studies (*i.e.*, unreasonably low fill factors, exaggerated digital electronic costs that are inconsistent with Ameritech's underlying vendor contracts, *etc.*).
- Ameritech's subloop unbundling cost study double counts investments in splice cases and terminals. As a result of this "double counting," a combination of unbundled subloops equaling the entire unbundled loop is more

costs that are reflected in the monthly recurring rate (i.e., no investment is added simply by selling the same loop in smaller pieces).

- Investments associated with splice cases, terminals, and other pieces of equipment where a competitor might access a subloop, are booked to the copper or fiber cable account specific to the type of cable the equipment supports. Hence, expenses associated with these pieces of equipment that must also be present within a complete unbundled loop are recovered through the cable expenses already included via the LFAM model and incorporated in the cost study. The unbundled loop study does not contain a separate rate element associated with recovering expenses for this equipment.
- One of the fastest growing forms of local exchange competition involves the use of existing cabling within facilities to offer competitive telephone service to customers.
- In order to expand such service to reach customers in MDUs and in campustype arrangements (such as universities, corporate parks, etc.), CLECs must be able to interconnect directly with Ameritech's facilities in the most efficient, cost-effective manner possible.
- Ameritech's cost study for unbundled subloops fails to permit CLECs efficient access in multiple dwelling units and campus settings. Specifically, Tab 1 of Ameritech's Unbundled Subloop Cost Study provides a diagram of the cost elements studied. (Exhibit 2 to Starkey Testimony, Exhibit 72 (MTS-2)). In particular, the points of connection shown for a "commercial building," "residential" setting and "multi tenant building or campus type arrangement" do not provide sufficient granularity to assure nondiscriminatory access by CLECs.

PROPOSED CONCLUSIONS OF LAW:

• The Commission requires Ameritech to revise its subloop cost studies to correct errors on the same basis that Ameritech is required to correct UNE loop cost studies.

Service Classes A, B, C, and D; ATM Forum Quality of Service Classes 1, 2, 3, and 4; and Service Class Categories Available Bit Rate, Constant Bit Rate, Variable Bit Rate – real time, Variable Bit Rate – not real time, and Unspecified Bit Rate;

- 2. collocation of a CLEC owned "plug-in" card within an Ameritech remote terminal; and, incremental costs specific only to the data requirements of a "Line Shared" loop using the Pronto architecture (consistent with the description above).
- The FCC has stated that if parties are unable to negotiate a reconfigured single point of interconnection at MDUs, the ILEC will be required to construct one. The FCC states:

Although we do not amend or rules governing the demarcation point in the context of this proceeding, we agree that the availability of a single point of interconnection will promote competition. To the extent there is not currently a single point of interconnection that can be feasibly accessed by a requesting carrier, we encourage parties to cooperate in any configuration of the network necessary to create one. If parties are unable to negotiate a reconfigured single point of interconnection at multi-unit premises, we require the incumbent to construct a single point of interconnection that will be fully accessible and suitable for use by multiple carriers.³

- Allowing CLEC technicians to cross-connect directly to the terminal equipment ensures efficient, equal and nondiscriminatory access to customers.
- CLEC interconnection to the ILEC should be available at either an MPOE or SPOI, or both. CLECs should have the flexibility afforded by these options to offer services to campus-type settings in a most cost-effective and efficient manner.
- Ameritech shall submit revised subloop studies defined at a level of granularity adequate to address the problems identified previously. Specifically, Ameritech shall provide for: (1) direct interconnection to Ameritech's house and riser terminal blocks to gain access to house and riser cable in MDUs; and, (2) direct interconnection at SPOIs and MPOEs as discussed herein. Ameritech shall provide these elements in a fashion that complies with the

ISSUE I(C)(5) - To what degree is Ameritech required under federal law and to what degree should it be required under state law to offer extended loops and collocation of DSLAMs?

CLEC POSITION:

- See Issue I(C)(6) below.
- Ameritech is required to permit CLECs to collocate at any ILEC premises. TA
 96, Section 251(c)(6). This includes ILEC remote terminals (RTs).
- There really is no dispute regarding whether Ameritech is required under federal law to allow for DSLAM collocation. Ameritech, however, wrongly claims that because it may allow CLECs to collocate DSLAMs at RTs on an individual case basis, then CLECs are not impaired if they do not have access to Ameritech's Project Pronto architecture on an unbundled basis. As referenced in the Sprint and CLEC testimony and briefs, Ameritech is wrong on this point.

CLEC BRIEF REFERENCES:

• Sprint Initial Brief: 32-34, 42-44.

• Sprint Reply Brief: 20-21, 25-31.

CLEC TESTIMONY REFERENCES:

- See Issue I(C)(6) below.
- Ameritech permits collocation of DSLAMs at Remote Terminals if there is collocation space available.
- Collocation space is not always available at the RT even with the commitments made by SBC/Ameritech to the FCC in the Project Pronto Waiver Order.
- The FCC stated that "collocation by competitive LECs at remote terminals is likely to be costly, time consuming, and often unavailable." Line Sharing Reconsideration Order, ¶ 13.
- Collocation of DSLAMs at the RT by CLECs is a method of accessing UNEs different than the way that Ameritech or its affiliates access UNEs by utilizing line cards collocated in the Project Pronto NGDLCs.

PROPOSED CONCLUSIONS OF LAW:

- See Issue I(C)(6) below.
- Ameritech must offer CLECs the option of collocating DSLAMs at the RT. This option, however, does nothing to alter the Commission's conclusions that CLECs are impaired without unbundled access to the copper/fiber loops made available though Project Pronto.
- Collocation of DSLAMs at the RT by a CLEC rather than obtaining access to the Project Pronto UNEs by virtually collocating a line card means that CLECs have satisfied the third criteria from the FCC's packet switching Rule because CLECs cannot collocate a DSLAM in the same manner that Ameritech does.
 47 CFR § 51.319(c)(3)(B)(iii).

ISSUE I(c)(5)(a) - What connections must be afforded at remote terminals

and in the CO to access those elements?

CLEC POSITION.

NGDLC architecture. This also includes giving CLECs the option of not collocating at the CO to transport the DSL data stream to the CLEC ATM switch.

CLEC BRIEF REFERENCES:

- Sprint Initial Brief: 24 through 25, 32 through 34.
- Sprint Reply Brief: 20 through 21.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3098-3118, Vol. 9, pp. 3392-3413 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3222, 3227-32 (Starkey Surrebuttal).
- See Vol. 6, pp. 2150, 2449 (Ankum Direct).
- See Vol. 8, pp. 2827-28 (Idoux Redirect).
- Sprint Initial Brief: 24 through 25, 32 through 34.
- Sprint Reply Brief: 20 through 21.

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) below.

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) below.

ISSUE I(C)(5)(b) - What means of unbundling Digital Loop Carrier (DLC)

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-89 through I.C.-103.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3050-3064, 3093-3118, Vol. 9, pp. 3340-3353 (confidential record), 3387-3413 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3200-3207, Vol. 9, pp. 3472-73 (confidential record) (Starkey Surrebuttal).
- Sprint Initial Brief, 13 through 14.

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(2) and I(C)(6).

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(2) and I(C)(6).

ISSUE I(C)(5)(c) - Should unbundling requirements be different depending

on DLC technology (e.g., UDLC vs. IDLC) or loop facilities (e.g., copper vs.

fiber)?

CLEC POSITION:

- Ameritech must be required to unbundle IDLC for CLECs.
- See Issue I(C)(2)(j)(1)(2).

CLEC TESTIMONY REFERENCES:

• See Vol. 8, p. 3057, Ex. 74, Vol. 9, p. 3446 (confidential record) (Starkey Rebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(2) and I(C)(6).

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(2) and I(C)(6).

ISSUE I(C)(5)(c)(1) - If so, which of the following options should be required?

Initial cap integrated network architecture?

Multiple switch hosting?

Digital cross-connect grooming?

Side-door grooming?

CLEC POSITION:

• See Issue I(C)(2) and I(C)(6).

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-47 through I.C.-52.

CLEC TESTIMONY REFERENCES:

• See Vol. 8, pp. 3057-60, Ex. 7, Vol. 9, p. 3446 (confidential record) (Starkey Rebuttal).

PROPOSED FINDINGS OF FACT:

ISSUE I(C)(5)(d), (d)(1), and (d)(2) – How should the various unbundling scenarios in (c) and (d) be priced?

Should the price for unbundling scenarios be determined based on individual scenarios or as a meld?

As an interim or permanent pricing option should UDLC loop UNEs be priced no higher than IDLC loop UNEs until IDLC unbundling is achieved?

CLEC POSITION:

• IDLC architecture should be assumed as the input for pricing regardless of whether Ameritech actually agrees to unbundle its IDLC architecture.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-43 to I.C.-54.

CLEC TESTIMONY REFERENCES:

• See Issue I(C)(2)(j)(1)(2).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(2)(j)(1)(2).

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(2)(j)(1)(2).

- Project Pronto must be unbundled, including subloops, extended loops,
 collocation of DSLAMs and packet switching elements.
- The CLECs unquestionably have demonstrated that Project Pronto must be unbundled. Ameritech witness Flatt conceded that it is technically feasible to do so. Ameritech unbundles voice services over the Project Pronto network, yet refuses to unbundle data services over the virtually identical network elements. Ameritech must not be permitted to reengineer its local loop plan, making it advanced services compatible, and then prohibit CLECs from using that network on an unbundled basis. Refusal to unbundle Project Pronto guarantees a cable modem/Ameritech DSL duopoly in the advanced services market that will disadvantage Wisconsin consumers. Lack of additional CLEC competition to the advanced services provider mix will lead to less innovation and higher prices for consumers.
- The CLECs demonstrate that they are impaired without unbundled access to the Project Pronto architecture. FCC Rule 51.317 (b)(2) and (3). The table below summarizes the reasons why the Ameritech alternatives to unbundling are inadequate and analyzes the factors from the FCC rule to demonstrate the impair argument.

Offering	unbundling the elements of the retail offering. Otherwise, ILECs could make all of their products available only as a retail offering to avoid their unbundling obligations. ⁴ The Broadband Agreement by its own terms can be modified or unilaterally withdrawn by Ameritech and is not subject to Commission authority or approval. ⁵ CLECs will not be able to differentiate their broadband offering from that of AADS. ⁶	withdrawn or modified unilaterally at any time. • Quality – CLECs services will be all unspecified bit rate data delivery until Ameritech determines that it is ready to provide a committed bit rate product. CLECs could bring different products with specified bit rates to the market if Project Pronto is unbundled. • Promotion of Innovative Services – Same as above. • Impact On Network Operation – The Broadband Service as it is configured will not permit Sprint to offer the service that it seeks to offer.
CLECs may use the existing copper network	 Existing copper network limits the numbers of customers that can obtain advanced services by over 20 million in SBC territory.⁷ Most of the remaining copper loops that are not Project Pronto loops will be over 12,000 feet in length and are subject to conditioning charges while Project Pronto loops are not.⁸ Project Pronto loops are all less than 12,000 feet and capable of transmitting data at speeds much greater than non-Project Pronto loops that exceed 12,000 feet.⁹ It makes no sense for Ameritech to maintain dual loop networks, especially given the projected efficiencies it cites in Ex. 32. The existing copper network may be retired by Ameritech after 2003¹⁰. 	 Ubiquity – Clearly, CLECs will not have the same ubiquitous reach to provide advanced services, given that extending the reach of advanced services is one of the primary reasons for deploying. Cost – CLEC will have to pay conditioning charges not paid by Ameritech. Quality – CLEC data transmission speeds will be slower due to loop length limitations for existing copper loops. Certainty – Copper loops may be retired at any time.
CLECs may collocate their own DSLAMs and	The FCC found that collocation by CLECs at RTs is costly, time consuming and often unavailable. 11	Cost – Costs to collocate DSLAMs at multiple RT

⁴ UNE Remand Order, ¶ 67; Sprint Initial Brief, pp. 28-29...

Sprint Initial Brief, pp. 29-30. Ameritech claims that it would not be logical for it to withdraw the Broadband Service.

lease Dark Fiber	 Difficulties in collocating at a RT include space considerations, availability of dark fiber, and completing an engineered controlled splice. All of these processes involve individual case basis pricing and/or time frames for completion that add uncertainty and costs for the CLECs.¹² Based on Sprint's experience in collocating a DSLAM at an RT in Kansas, it could take Sprint more than \$22 Million to collocate only at the currently installed RTs.¹³ 	locations are extensive. Timeliness – Contrary to Ameritech's claims, 14 Sprint presented evidence that its experience for DSLAM collocation ranges much more than the 6 months cited by Ameritech. Ubiquity – Given the excessive costs for collocating a DSLAM, it would be economically impossible for a CLEC to compete with Ameritech's offering. Certainty – The ICB pricing and uncertain time frames for obtaining a collocation, dark fiber and engineered control splices needed complete this arrangement cause CLECs a great deal of uncertainty.
CLECs may build their own facilities.	 It is economically impossible for CLECs to duplicate the network infrastructure to serve customers. That is why the Act requires unbundling of network elements. 	CostUbiquityTimeliness

The four conditions from the FCC's packet switching rule are satisfied. 47

CFR 51.319(c)(3)(B). (i) Ameritech has deployed digital loop carrier systems and much of its deployment replaces existing copper. (ii) the existing copper loop network is insufficient to provide xDSL services to the mass markets.

Indeed, the reason for Project Pronto is to extend the reach of xDSL. The Texas Arbitration Award states that "Pronto was devised to reach consumers who otherwise could not be served over the existing network." Texas

Arbitration Award, p. 77. (iii) Ameritech does not allow CLECs to collocate

line cards in the NGDLC in the same manner that Ameritech does. Moreover, the FCC has found that collocating a DSLAM at the RT is costly, time consuming and often unavailable. The Texas Arbitration Award finds that Ameritech's affiliate, SWBT, "does not allow CLECs to collocate DSLAMs at the remote terminal on the same terms and conditions that it provides to itself." Texas Arbitration Award, p. 77. (iv) Ameritech undoubtedly is deploying packet switching for itself. Exhibit 32 is rife with examples of the efficiencies, expense savings, capital savings, and revenue opportunities presented to the SBC ILECs, which would include Ameritech Wisconsin, from the deployment of Project Pronto. The Texas arbitrators "disagree with SWBT's position that the deployment of Pronto and the associated packet switching components, is not for its own use." Texas Arbitration Award, p. 78. Moreover, the Illinois Commission found that the conditions were met in its arbitration decision in 00-0312/0313. The Illinois Commission ALJ's proposed decision in 00-0393 found that the packet switching conditions are satisfied. The Arbitration Award in Docket No. 22469 in Texas found that that the packet switching criteria are satisfied in discussing whether Ameritech's affiliate, SWBT, must unbundle Project Pronto. (Award, pp. 61-91). 15

• Sprint Initial Brief: 14 through 26.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3090-3131, Vol. 9, pp. 3385-3425 (confidential record)
 (Starkey Rebuttal).
- See Vol. 8, p. 3222 (Starkey Surrebuttal).
- See Vol. 8, pp. 2718-2743 (Idoux Rebuttal).
- See Vol. 8, pp. 2755-56 (Idoux Surrebuttal).

PROPOSED FINDINGS OF FACT:

- The end-to-end Project Pronto loop is a combination of network elements or a single network element. It can be used to provision a single customer; it is ordered like UNEs; and it is priced like UNEs at TELRIC.
- Voice calls provisioned over the Project Pronto architecture traverse the same or similar network elements that the data transmissions traverse. Ameritech will provide the voice service that uses Project Pronto on an unbundled basis, yet refuses to do so for the data service.
- It is technically feasible to provision voice only loops over the Project Pronto architecture and Ameritech plans to do so in certain situations.
- Ameritech witness Flatt concedes that it is technically feasible for CLECs to obtain data and voice service by virtually collocating a line card at the NGDLC, so long as the line card is manufactured or licensed by Ameritech's vendor, Alcatel.
- Ameritech's capacity concerns regarding the line card and the bandwidth used by CLECs are misplaced. CLECs are incented to use the Project Pronto network elements on an efficient basis because appropriately developed.

- CLECs using the Broadband Service offering would be limited to throughput speeds and other quality levels consistent with that chosen by Ameritech Wisconsin for its retail services, and generally, would be provided no real control over the services they offer or opportunities to differentiate or innovate.
- CLECs using Ameritech Wisconsin's Broadband Service offering would have no ability to self-provision certain components of the xDSL service for purposes of controlling their own product or controlling their costs.
- Ameritech's Broadband Service Agreement gives it the authority to unilaterally withdraw or modify the offering for virtually any reason.
- CLECs cannot rationally base a business plan on a service offering that can be withdrawn or modified at any time.
- The commitments in the Project Pronto Waiver Order are of little significance. Collaborative processes cannot force Ameritech to implement a particular line card or provide sufficient capacity for CLECs if Ameritech thinks that it will be harmed competitively.
- Availability of a service like the Broadband Services is not a viable substitute for providing the service as UNEs.
- Using homerun copper loops to provision xDSL services to CLEC customers remains an option with significant and damaging limitations that can only be truly overcome by unbundling the Project Pronto architecture.
- Because the ADLU card in the remote terminal generates the ADSL signal far closer to the customer's residence than was earlier provided by a central office-based DSLAM (i.e., the signal is stronger, further into the network), interference issues (i.e., cross-talk) arise for homerun copper loops sharing distribution facilities with loops accommodating Project Pronto generated services. These interference issues make some homerun copper loops that were previously acceptable to carry CLEC xDSL signals, unusable for that function, absent unbundled access to the Project Pronto network, CLECs will incur higher costs, they will experience lower or less consistent levels of

- Ameritech Wisconsin initiated its Project Pronto network initiative specifically to overcome limitations inherent in the ability of those same copper loops to support advanced services to the majority of its customer base.
- If CLECs are relegated to using only copper facilities to service their customers, they will be impaired as that term is defined by the FCC.
- The FCC found that collocation by CLECs at RTs is costly, time consuming and often unavailable.
- Difficulties in collocating at a RT include space considerations, availability of dark fiber, and completing an engineered controlled splice. All of these processes involve individual case basis pricing and/or time frames for completion that add uncertainty and costs for the CLECs.
- Based on Sprint's experience in collocating a DSLAM at an RT in Kansas, it could take Sprint more than \$22 Million to collocate only at the currently installed RTs in Wisconsin
- .Ameritech has deployed digital loop carrier systems throughout Wisconsin.
- Much of the deployment of NGDLC involves the replacement of existing copper.
- Exhibit 32 demonstrates the significant efficiencies that Ameritech expects to obtain by replacing copper with fiber in its network.
- The existing copper loop network is insufficient to provide xDSL services to the mass markets. Indeed, the reason for Project Pronto is to extend the reach of xDSL. Ameritech will be able to provision xDSL service to an additional 20 million customers throughout the 13 state SBC territory that cannot serve without Project Pronto.
- Project Pronto loops are engineered to be 12,000 feet or less. This gives Ameritech's affiliate two advantages over CLECs who do not have access to Project Pronto loops on an unbundled basis. First the affiliate will not have to

- Ameritech will have an incentive to retire the copper plant because it is inefficient to maintain two loop networks simultaneously.
- The Project Pronto Waiver Order Restrictions on retiring copper plant expire in 2003.
- Ameritech undoubtedly is deploying packet switching for itself. Exhibit 32 is
 rife with examples of the efficiencies, expense savings, capital savings, and
 revenue opportunities presented to the SBC ILECs, which would include
 Ameritech Wisconsin, from the deployment of Project Pronto. Thus,
 Ameritech's threats to not deploy Project Pronto are meaningless.
- Line cards are pieces of equipment eligible for collocation.
- Line cards are used to access UNEs.

PROPOSED CONCLUSIONS OF LAW:

- This Commission has the authority to order the unbundling of Project Pronto.
- The FCC has ruled that its Section 251(c)(3) unbundling obligations apply to all telecommunications services including advanced services.
- The Circuit Court of Appeals for the D.C. Circuit has twice found that the Telecom Act's unbundling obligations apply to advanced services.
- The UNE Remand Order specifically gives state commissions the authority to unbundle network elements using the framework established in Section 251 and the FCC rules.
- The Project Pronto Waiver Order limited its findings to the specific requests to permit the SBC ILECs to own the plug-in cards and optical concentration devices instead of the affiliates. The FCC specifically found that the Waiver Order does not constitute any finding or determination with respect to SBC's compliance with Section 251. Accordingly, the Commission affords the Project Pronto Waiver no weight in determining Ameritech's unbundling

- Wisconsin law, W.S.A. 196.219, gives the Commission authority to order additional unbundling of intrastate telecommunications services based on a determination that it is required in the public interest and is consistent with the factors under section 196.03(6).
- The impair standard from Section 251(d)(2)(B) applies here rather than the necessary standard because no evidence was presented that the Project Pronto network elements are proprietary.
- The four criteria from the FCC's packet switching rule are satisfied. First, Ameritech has deployed digital loop carrier systems. Second, copper loops cannot support xDSL services that CLECs seek to offer because the Project Pronto loops have a significant speed and cost advantage over the existing copper loops. Third, Ameritech does not permit CLECs to collocate DSLAMs in the same manner that Ameritech does. Fourth, Ameritech is deploying packet switching for its own use.
- Even if the packet switching conditions are not satisfied, CLECs are impaired without access to the Project Pronto loops. The alternatives offered by Ameritech, the Broadband Offering, use of the existing copper network, collocation of DSLAMs and lease of dark fiber, and building their own facilities do not relieve CLECs of the material diminishment to CLECs ability to provision the services they seek to offer. Thus, under the relevant FCC rule, Rule 51.317(b)(2), CLECs must obtain unbundled access to the Project Pronto UNEs. Also, the Commission finds that the factors from 51.317(b)(3) all favor the conclusion that the Project Pronto network elements be unbundled.
- Virtual collocation of line cards by CLECs in the NGDLC equipment is lawful.
 The Commission rejects Ameritech's arguments that line cards are not a "piece
 of equipment" and not used to access UNEs. The Commission also rejects
 Ameritech's argument that the virtual collocation of line cards requires
 Ameritech to construct a superior network.
- Accordingly, the Commission finds that where Ameritech installs Project Pronto network architecture, CLECs should obtain access to that network on an unbundled basis and virtually collocate plug-in cards at the NGDLC that are

- copper subloops from the remote terminal (RT) to the network interface device (NID) at the customer premise and the Serving Area Interface (SAI);
- copper subloops from the SAI to the NID;
- ADLU or any other technically feasible line card in the NGDLC either owned by Ameritech or the CLEC;
- lit fiber subloops between the RT and the OCD including permanent virtual paths on those subloops whether the paths for voice and data be on a single fiber or separate fibers; and
- and a port on the Optical Concentration Device (OCD) (otherwise known as an ATM switch) in the central office
- Moreover, Ameritech is required to make available on an unbundled basis all technically feasible features and functionalities of the NGDLC loop including all technically feasible quality of service classes for PVCs and PVPs.

ISSUE I(C)(6)(a) - Should Ameritech's broadband and combined voice and data service offerings be made available and priced according to UNE methodology? Should they be available as part of the UNE-P offering?

CLEC POSITION:

 Ameritech Wisconsin's broadband service offering allowing CLECs to use the DSLAM functionality of the remote terminal is not an adequate substitute for unbundled access.

CLEC BRIEF REFERENCES:

- See Vol. 8, pp. 3119-3123, 3052, Vol. 9, p. 3341 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 2736-37 (Idoux Rebuttal).
- See Vol. 8, pp. 2757-60 (Idoux Surrebuttal).

PROPOSED FINDINGS OF FACT:

- CLECs using the Broadband Service offering would be limited to the xDSL technology chosen by Ameritech Wisconsin.
- CLECs using the Broadband Service offering would be limited to throughput speeds and other quality levels consistent with that chosen by Ameritech Wisconsin for its retail services, and generally, would be provided no real control over the services they offer or opportunities to differentiate or innovate.
- CLECs using Ameritech Wisconsin's Broadband Service offering would have no ability to self-provision certain components of the xDSL service for purposes of controlling their own product or controlling their costs.
- Using homerun copper loops to provision xDSL services to CLEC customers remains an option with significant and damaging limitations that can only be truly overcome by unbundling the Project Pronto architecture.
- Because the ADLU card in the remote terminal generates the ADSL signal far closer to the customer's residence than was earlier provided by a central office-based DSLAM (i.e., the signal is stronger, further into the network), interference issues (i.e., cross-talk) arise for homerun copper loops sharing distribution facilities with loops accommodating Project Pronto generated services. These interference issues make some homerun copper loops that were previously acceptable to carry CLEC xDSL signals, unusable for that function. Absent unbundled access to the Project Pronto network, CLECs will incur higher costs, they will experience lower or less consistent levels of quality, they will have less ubiquitous access to similar facilities and they will

- Ameritech Wisconsin initiated its Project Pronto network initiative specifically to overcome limitations inherent in the ability of those same copper loops to support advanced services to the majority of its customer base.
- If CLECs are relegated to using only copper facilities to service their customers, they will be impaired as that term is defined by the FCC.

PROPOSED CONCLUSIONS OF LAW:

- Ameritech's wholesale broadband service is not an adequate substitute for access to the Project Pronto network elements as UNEs. The wholesale service offering leaves all control in the hands of Ameritech as to the types of xDSL service that may be provided. Moreover, limiting CLECs to the broadband service would restrict them to reselling only those xDSL services also provided by Ameritech's affiliate, without an opportunity to provide different xDSL services and different qualities of service. Of equal concern is the fact that services are not subject to arbitration under the Telecommunications Act of 1996, and may be modified or withdrawn unilaterally by Ameritech.
- The FCC has already specifically rejected the notion that an ILEC could circumvent the "impair" standard by offering its services in a wholesale offering
- Separate but unequal treatment is inherently discriminatory and is not allowed under the Act.

ISSUE I(C)(6)(b) - If Ameritech must unbundle certain packet switching

elements, which ones and/or under what circumstances?

CLEC POSITION:

• See Issue I(C)(6) above

CLEC BRIEF REFERENCES:

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3101-15, Vol. 9, pp. 3395-3409 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3228-29 (Starkey Surrebuttal).
- See Vol. 8, pp. 2735-37 (Idoux Rebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above

ISSUE I(C)(6)(b)(1) - How does Project Pronto include packet switching?

CLEC POSITION:

• See Issue I(C)(6) above

CLEC BRIEF REFERENCES:

- Sprint Initial Brief: 37 through 47.
- Sprint Reply Brief: 15 through 34.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3105-06 (Starkey Rebuttal).
- See Vol. 8, pp. 3228-29 (Starkey Surrebuttal).

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above

ISSUE I(C)(6)(b)(2) - Is NGDLC a form of packet switching?

CLEC POSITION:

• See Issue I(C)(6) above

CLEC BRIEF REFERENCES:

- Sprint Initial Brief: 37 through 47.
- Sprint Reply Brief: 15 through 34.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3105-15, Vol. 9, pp. 3399-3409 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3228-29 (Starkey Surrebuttal).
- See Vol. 8, pp. 2723, 2735-37 (Idoux Rebuttal).
- See Vol. 8, pp. 2762-64 (Idoux Surrebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above



ISSUE I(C)(6)(b)(3) - Should Ameritech be required to unbundle the

NGDLC if it is a form of packet switching?

CLEC POSITION:

• See Issue I(C)(6) above

CLEC BRIEF REFERENCES:

- Sprint Initial Brief: 37 through 47.
- Sprint Reply Brief: 15 through 34.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3101, 3105-15, Vol. 9, pp. 3395, 3399-3409 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 2735-37 (Idoux Rebuttal).
- See Vol. 8, pp. 2762-64 (Idoux Surrebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above

ISSUE I(C)(6)(c) - What options, including collocation, should be made

available in order for CLECs to provide DSL services?

CLEC BRIEF REFERENCES:

- Sprint Initial Brief: 47 through 49.
- Sprint Reply Brief: 32 through 34.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3092-3118, 3119, Vol. 9, pp. 3386-3412, 3413 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3221-3233 (Starkey Surrebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above

ISSUE I(C)(6)(c)(1) - Is it sufficient to provide a CLEC the ability to purchase an engineered control splice (ECS) in the field in order to collocate its own

DSLAM near the Project Pronto Next Generation Digital Loop Carrier

(NGDLC)?

CLEC POSITION:

• See Issue I(C)(6) above. DSLAM collocation and construction of an ECS at the RT impairs CLECs in offering the services they seek to offer.

CLEC TESTIMONY REFERENCES:

• See Vol. 8, pp. 2823-26 (Idoux Cross).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above.

PROPOSED CONCLUSIONS OF LAW:

• See Issue I(C)(6) above.

ISSUE I(C)(6)(c)(2) - Alternatively, should a CLEC be allowed to collocate its

own line card in the NGDLC?

CLEC POSITION:

• See Issue I(C)(6) above.

CLEC BRIEF REFERENCES:

• Sprint Initial Brief: 47 through 49.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, p. 3118, Vol. 9, p. 3413 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 2737-40, 2765-66 (Idoux Rebuttal).

PROPOSED FINDINGS OF FACT:

• See Issue I(C)(6) above.

PROPOSED CONCLUSIONS OF LAW:





ISSUE I(C)(6)(c)(4), (4)(a), (4)(b), and (4)(c) – BROADBAND SERVICE

(4) If Ameritech is not required to provide collocation of the line card in its NGDLC, then should Ameritech:

Be required to offer its Broadband Service that uses Project Issue Pronto architecture as an end-to-end unbundled element?

Be allowed to make its Broadband Service offering available at rates of its own choice?

Have the option to change its pricing method from the cost-based prices offered in this docket?

CLEC POSITION:

Ameritech's provision of its "broadband service" offering is not an adequate substitute for unbundling advanced services such as Project Pronto. To the extent Ameritech is ordered in this docket to provide its broadband service offering on an ongoing basis, CLECs have demonstrated that Ameritech fails to appropriately price its broadband service offering using TELRIC principles. Therefore, Ameritech should be required to provide TELRIC pricing for the broadband service offering to the extent it is ordered in this docket to continue to provide that offering.

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CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3222-25 (Starkey Surrebuttal).
- See Vol. 8, pp. 2721, 2741-42 (Idoux Rebuttal).
- See Vol. 8, pp. 2752-60 (Idoux Surrebuttal).

PROPOSED FINDINGS OF FACT:

- Ameritech has not provided reasonable, TELRIC-based prices for the network elements that comprise its broadband service offering.
- Ameritech Wisconsin's Broadband Services cost study simply relies upon the costs developed for this particular element in its subloop unbundling cost study. The subloop cost study relies upon many of the same, unreasonable assumptions that are described in detail above (i.e., unreasonably low fill factors, exaggerated digital electronic costs that are inconsistent with Ameritech Wisconsin's underlying vendor contracts, etc.).

PROPOSED CONCLUSIONS OF LAW:

• Ameritech Wisconsin is required to revise its unbundled subloop studies consistent with the recommendations of the CLEC position on these issues.

ISSUE I(C)(6)(d) - Whether offered as separate UNEs, an end-to-end unbundled element, or as a voluntary offering only, has Ameritech appropriately priced the elements of the Project Pronto architecture using TELRIC methodology?

CLEC POSITION:

Ameritech Wisconsin's "Broadband Service" offering is not properly priced

An important component of the Broadband Service offering is the subloop element extending from the Project Pronto remote terminal to the customer's premises. Ameritech Wisconsin's Broadband Services cost study simply relies upon the costs developed for this particular element in its subloop unbundling cost study. The subloop cost study relies upon many of the same, unreasonable assumptions that are described in detail above (i.e., unreasonably low fill factors, exaggerated digital electronic costs that are inconsistent with Ameritech Wisconsin's underlying vendor contracts, etc.). To the extent the Commission requires Ameritech Wisconsin to revise its unbundled loop studies consistent with the recommendations of the CLEC position on these issues above, it should likewise require that Ameritech Wisconsin's unbundled subloop study be revised accordingly.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-103 through I.C.-104.

CLEC TESTIMONY REFERENCES:

See Vol. 8, pp. 3083-87, 3119-21, 3135-36, Vol. 9, pp. 3372-76 (confidential record), 3413-15 (confidential record), 3429-30 (Starkey Rebuttal).

PROPOSED FINDINGS OF FACT:

- Ameritech Wisconsin's Broadband Services cost study simply relies upon the costs developed for this particular element in its subloop unbundling cost study.
- The subloop cost study relies upon many of the same, unreasonable assumptions that are described in detail above (i.e., unreasonably low fill factors, exaggerated digital electronic costs that are inconsistent with Ameritech Wisconsin's underlying vendor contracts, etc.).

PROPOSED CONCLUSIONS OF LAW:

• Ameritech has not provided reasonable, TELRIC-based prices for the network elements that comprise its broadband service offering.

ISSUE I(C)(7) - Should special construction charges be assessed for the provisioning of unbundled loops and, if so, how should those special construction charges be determined?

CLEC POSITION:

The Commission should find that Ameritech's special construction charge policy is discriminatory, permits Ameritech to double recover its expenses, and constitutes a barrier to entry. Accordingly, the Commission should prohibit Ameritech from assessing special construction charges on CLECs for the provisioning of unbundled loops, including "complex modifications," IDLC-related construction charges, and "new facilities."

Commission should require Ameritech to conduct an unbundled loop study that includes those costs and submit that study to the Commission for approval.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-104 through I.C.-156.



• CLEC Reply Brief: I.C.-24 through I.C.-29.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3081-89, 3133-61, Vol. 9, pp. 3370-78 (confidential record),
 3427-55 (confidential record) (Starkey Rebuttal).
- See Vol. 10, pp. 4223-47 (Jackson Rebuttal).
- See Vol. 10, pp. 4258-95 (Jackson Surrebuttal).



• See Vol. 10, p. 4290 (Jennings Rebuttal).

PROPOSED FINDINGS OF FACT:

- Special construction charges in many cases amount to, and continue to amount to, tens of thousands of dollars that a CLEC is required to pay before being provided access to an unbundled loop to serve a single customer. (Tr. Vol. 8, p. 3082; Tr. Vol. 10, pp. 4258, 4295, and Exhibit 108 (NDJ-1)).
- There are numerous administrative difficulties encountered by competitors by the imposition of special construction charges.
- The evidence in this proceeding demonstrates that in nearly every circumstance, the activities for which Ameritech is attempting to assess special construction charges already are recovered in the TELRIC-based monthly recurring charges.

recovered from carriers or end users purchasing loops that are supported by the equipment. Instead, Ameritech estimates the total amount of expenses that will be required to procure that piece of equipment for use in the network as well as expenses associated with installing the equipment, both the labor of its own employees and any outside or vendor labor used and expenses associated with maintaining that equipment over its economic life. Ameritech then adds these expenses to the \$1,000 investment, thereby arriving at a total installed cost ("TIC"), and includes that amount in its studies to be recovered. Many times, after the application of the multiple factors that are applied to raw investment throughout the Ameritech studies, a piece of equipment that costs \$1,000 to purchase, is included in the Ameritech study at a TIC cost of more than \$5,000 (i.e., the factors "gross-up" the investment by 500%). (OSS Proceeding Tr. Vol. 5, p. 1298).

- As a general matter, these factors are developed by Ameritech identifying its historical expenses incurred in procuring, installing, maintaining, provisioning and otherwise "moving, adding, or changing" equipment in its network (referred to as "moves, adds and changes" "MACs"). Ameritech aggregates the expenses associated with these activities by "Field Reporting Codes" ("FRCs") that are used to aggregate costs associated with different types of equipment. It aggregates the total expenses associated with these activities over a given period of time (a year for example) and then compares these expenses to the total material price of all of the equipment that received the benefit of those activities in that year. In doing so, Ameritech arrives at a "ratio" of expenses associated with procuring, installing, maintaining, and provisioning the equipment relevant to a given level of material investment (i.e., expenses/investment). (Id., at 1299).
- The equation below provides a simplistic understanding of how Ameritech arrives at one of its factors, the "In-Plant Factor," associated with installing FRC-257c (pair gain equipment i.e., digital loop carrier) equipment:

Total expenses \div Total = In-Plant associated with material Factor which installing all investment in digital in digital = In-Plant associated with material associated with material investment is applied to all digital

- Ameritech, throughout its unbundled loop study, incorporates the use of no
 fewer than 12 factors derived in a fashion similar to that described above.
 Ameritech employs these individual factors for purposes of recovering
 expenses associated with installing equipment, maintaining equipment,
 warehousing equipment, engineering equipment, network planning and nearly
 every other activity undertaken by an Ameritech network employee in the
 normal provision of service.
- To the extent that an Ameritech employee performs a task, such as splicing, accomplishing a "dead lug throw," installing a pedestal, etc., in the normal course of his/her daily work and, thereby, assigns his/her time and expenses to the appropriate Activity Code, those expenses are captured by the Ameritech TELRIC studies and included in the costs for an unbundled (as well as a retail) loop. (Id., at 1302). Moreover, in nearly every circumstance where Ameritech attempts to charge CLECs via its special construction charges, Ameritech does not assess tens of thousands of dollars in nonrecurring charges on its retail customers when they order service.
- This double recovery and discriminatory treatment serve as major economic and operational obstacles to CLECs attempting to compete with Ameritech in the market for local exchange services.
- Ameritech's assessment of special construction charges has been reviewed and rejected by Illinois, Michigan, Ohio, and Indiana.

PROPOSED CONCLUSIONS OF LAW:

- The charges under Ameritech's FMOD policy are discriminatory. Ameritech's policy allows it to assess special construction charges on CLECs when an Ameritech retail customer ordering access to the same facility would be charged no more than the tariffed retail rate (i.e., no special construction charges would be assessed).
- Ameritech's special construction charge policy applies disparate rates, terms, and conditions for access to the Ameritech network depending upon the extent to which an order for network facilities is placed by a CLEC or by an

discriminatory," "as used throughout section 251" to require Ameritech to apply "rates, terms, and conditions" equally between third parties as well as itself. (Local Competition Order, ¶ 218). Thus, the requirement to provide non-discriminatory access requires that Ameritech apply special construction charges consistently when one of its non-competitor customers orders a loop requiring certain types of complex dispatch. This, however, has not been Ameritech's practice. In the vast majority of cases where Ameritech would assess a competitor special construction charges, it provides the same facilities to retail customers without assessing like charges.

- Moreover, the costs Ameritech attempts to recover via its FMOD policy already are recovered in the monthly recurring and non-recurring rates it charges for UNEs. Allowing Ameritech to assess its approved UNE rates in combination with special construction charges resulting from its FMOD policy allows Ameritech to double-recover its expenses.
- Ameritech's FMOD policy and its imposition of special construction charges also enables Ameritech to significantly impede the entry of its competitors into the local telecommunications marketplace. Ameritech uses the FMOD policy to levy substantial non-recurring charges charges not approved or even reviewed by this Commission upon CLECs trying to win local customers away from Ameritech. In simplest terms, the FMOD policy allows Ameritech to protect its incumbent customer base and to raise the costs of its rivals by double recovering its legitimate UNE costs.
- Ameritech's FMOD policy constitutes a barrier to entry because it is a cumbersome and unnecessary process by which the provision of service to CLEC end user customers can be delayed unnecessarily and leaves competitors unsure of the charges they will face in serving any given customer.
- Allowing Ameritech to develop and assess special construction charges on a case-by-case basis without Commission approval or oversight is akin to giving Ameritech access to a "blank check." A CLEC often is faced with the option of paying enormous special construction charges before it can use a facility required to serve a new customer (in many cases tens of thousands of dollars or more) or, decide simply not to serve that customer (the customer thereby

incentive to slow competitive entry, be used to effectively protect its incumbent customer base.

- This Commission concludes that Ameritech is prohibited from assessing special construction charges before providing CLECs access to UNE facilities. Ameritech is allowed to assess its competitors only those rates and charges approved by this Commission in this proceeding when those competitors seek access to an unbundled network element.
- To the extent Ameritech believes it is incurring costs for which it is not being compensated via its current TELRIC based rates, its appropriate avenue of recourse is to conduct an unbundled loop study that includes those costs and submit that study to the Commission for approval.
- To the extent special construction activities concern adjustments to the Ameritech network for purposes of supporting either unbundled loops or retail loops, those expenses must be recovered from all the parties that may use that facility over the facility's economic life. The only way to ensure recovery in this economically rational fashion is to include the costs of those adjustments in a properly fashioned TELRIC study.
- Ameritech's current process of charging the entirety of the expense to the "first person in" penalizes the first CLEC who encounters a facility, or a portion of the Ameritech network, that must be refashioned. And, to the extent the CLEC that paid the entirety of the expense must turn the facility back to Ameritech for Ameritech's use in providing service to that customer in a timeframe shorter than the economic life of the facility, this process leaves Ameritech with a more efficient, more robust network to be used to serve its own customers at the original CLEC's expense. Neither of these outcomes is conducive to economically efficient cost recovery or good public policy.
- Moreover, the FCC's rules do not permit Ameritech to charge a CLEC the entirety of the investment associated with placing a piece of equipment.
- In summary, in the future Ameritech may assess "construction" or any other UNE related charge only when such a charge has been approved by this

ISSUE I(C)(7)(a) — Should CLECs be charged special construction or any other facilities modification charges for complex modifications (including build-arounds)?

CLEC POSITION:

 The Commission should preclude Ameritech from assessing special construction charges for complex modifications.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-104 through I.C.-121, I.C.-127 through I.C.-130.
- CLEC Reply Brief: I.C.-26 through I.C.-29.

CLEC TESTIMONY REFERENCES:

- See Vol. 9, pp. 3474-75 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3207-3220 (Starkey Surrebuttal).
- See Vol. 10, p. 4233 (Jackson Rebuttal).
- See Vol. 10, p. 4252 (Jackson Surrebuttal).

PROPOSED FINDINGS OF FACT:

- Ameritech does not assess special construction charges for complex modifications when accommodating the needs of its retail customers, or its special access customers.
- Ameritech's monthly recurring charges already recover the costs associated

PROPOSED CONCLUSIONS OF LAW:

- None of the circumstances included in Ameritech's FMOD policy in which it proposes to assess special construction charges for complex modifications are required or appropriate to ensure that Ameritech recovers it TELRIC-based costs associated with providing access to unbundled network elements.
- Consequently, Ameritech is precluded from assessing such charges for complex modifications.

ISSUE I(C)(7)(b) – IDLC/UDLC INTERCONNECTIONS

Should CLECs be charged special construction or any other facilities

modification charges for IDLC/UDLC interconnections?

CLEC POSITION:

 The Commission should preclude Ameritech from assessing special construction charges for IDLC/UDLC interconnections.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-104 through I.C.-121, I.C.-130 through I.C.-141.
- CLEC Reply Brief: I.C.-24 through I.C.-26.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3082-89, 3137-43, 3145-50, Vol. 9, pp. 3371-78 (confidential record), 3431-3437, 3439-44 (confidential record) (Starkey Rebuttal).
- See Vol. 8, pp. 3210-18, Vol. 9, pp. 3474-75 (confidential record) (Starkey

PROPOSED FINDINGS OF FACT:

- Project Pronto is slated to substantially increase the number of IDLC systems used in the Ameritech Wisconsin network.
- It is technically feasible to unbundle all IDLCs. (Exhibit 74).
- The costs associated with building a UDLC already are included in Ameritech's unbundled loop monthly recurring rate.
- Ameritech's claim that it incurs "additional costs" (i.e., costs not included in the TELRIC study) when it must provision the following facilities: (1) a copper facility stretching from the Host Switch to the end user, or (2) a UDLC remote terminal ("RT"), central office terminal ("COT"), plug-in circuit cards and fiber from the RT to the COT is erroneous. Provisioning these facilities would generate "additional costs" above and beyond those in the cost study only if costs associated with these specific pieces of equipment were not already recovered in the cost study. However, each of these pieces of equipment, exactly as Ameritech has described them, already is included in the unbundled loop cost study, and costs associated with providing individual circuits using these pieces of equipment already are recovered in the monthly recurring rate for an unbundled loop. (See Tr. Vol. 8, pp. 3146-47 and Ameritech's Unbundled Loop Study).
- Ameritech, via its FMOD policy, attempts to recover from a single CLEC, ordering as little as a single loop, the entirety of the UDLC investment required to support approximately 700 loops. Moreover, it attempts to recover this investment from the CLEC upfront, in a single payment (many times exceeding \$100,000). (Tr. Vol. 8, p. 3211). Ameritech then keeps the equipment paid for by the CLEC and charges other customers (both retail and CLECs) to use it (even though Ameritech paid nothing for it).
- Ameritech witness Florence conceded that Ameritech double recovers investments in UDLC equipment by assessing both the monthly recurring unbundled loop rate and special construction charges. (Tr. Vol. 6, p. 1629).

- The FCC requires Ameritech to offer access to an unbundled loop even if it
 uses an IDLC system. The FCC provides no room for Ameritech to remove
 the loop from the IDLC system and relegate it to a UDLC system, let alone
 allow Ameritech to charge a CLEC the entire investment associated with
 placing the new UDLC system in such a circumstance.
- The FCC requires that all rates and charges assessed by ILECs for access to unbundled network elements comply with its TELRIC costing standard. (47 U.S.C. § 51.501 § 51.515). Assessing a CLEC the entirety of the investment associated with placing a piece of equipment (i.e., a UDLC system) that will serve hundreds (even thousands) of loops and whose ownership will remain with Ameritech is not consistent with those rules.
- What Ameritech proposes here is not to give CLECs a "ride" on Ameritech's existing facilities, but intends to use one set of facilities for itself, and give the CLECs a "ride" on an entirely different set of facilities not to be used by Ameritech going forward. Therefore, what Ameritech is attempting to recover by at least one portion of its special construction charges is not the cost of making its facilities available to CLECs, but rather the cost of shifting CLECs off of Ameritech's facilities (at least those it intends to use for its own customers going forward) and instead putting CLECs on facilities which Ameritech is attempting to abandon any way, in favor of its new technology. It is as though Ameritech is attempting to provide automobiles for its own customers, and at the same time charge CLECs for the costs of shifting those customers to a horse and buggy when the CLEC manages to obtain the customer by competition with Ameritech.
- Ameritech is doing everything in its power to make sure that no CLEC serves even a single customer over IDLC.
- CLECs cannot compete with Ameritech if they have to use UDLC to serve customers that Ameritech serves over IDLC, and which Ameritech first switches to UDLC at great expense to the CLEC. When this happens, the costs to the CLEC are entirely different than the costs Ameritech incurs itself. Ameritech must fulfill its statutory obligation to provide CLECs with the same access to IDLC-served customers as Ameritech provides to itself. Ameritech

- Allowing Ameritech to recover IDLC-related special construction charges would result in double recovery. The costs associated with building a UDLC already are included in the unbundled loop monthly recurring rate and no "additional costs" are present that need to be recovered via special construction charges. If Ameritech is allowed to assess both its monthly recurring rate for an unbundled loop and special construction charges for placing a UDLC, it will have recovered costs associated with the same UDLC system twice (i.e., classic "double recovery" of the same costs).
- As IDLC-related construction charges become more prevalent in the future, pursuant to Project Pronto's expressed purpose, CLECs' costs of entering the market will increase. This, in turn, will slow CLECs' entry timetable and reduce the likelihood that they will market in areas served by IDLC or in areas in which loop conditioning or other similar modifications are required, if indeed they can identify these areas in advance so as to avoid them.
- Consequently, Ameritech is precluded from assessing special construction charges for IDLC/UDLC interconnections.

ISSUE I(C)(7)(c) - Should CLECs be charged special construction or any other facilities modification charges for constructing new facilities? CLEC POSITION:

 The Commission should preclude Ameritech from assessing special construction charges for the construction of new facilities.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-104 through I.C.-121, I.C.-141 through I.C.-156.
- CLEC Reply Brief: I.C.-26 through I.C.-29.

CLEC TESTIMONY REFERENCES:

PROPOSED FINDINGS OF FACT:

- In the past, Ameritech has, through the normal course of its business, expanded its network to provision access lines to its customers. Stated otherwise, Ameritech only assessed construction charges on its customers in truly unique or special situations where facilities did not exist to connect them to the network. Ameritech's most recent tariff filing significantly reduced the circumstances in which Ameritech would construct facilities to connect its customers to its network without an additional fee (i.e., special construction charges).
- A similar tariff filing attempt on the part of Ameritech in Illinois was rejected by the Illinois Commerce Commission.
- Under the new Ameritech construction charges tariff, Ameritech does not charge its retail customers for costs related to the DLC issues.
- Ameritech has measured the costs of providing network access lines to its customers, both business and residential customers, by averaging the increment costs associated with provisioning a single network access line within a given geographic region. To date, Ameritech has established rate zones within which it provides access lines at an averaged monthly rate. By averaging its rates, Ameritech and the Commission have understood that some individual loops will cost Ameritech more than the average (perhaps significantly more) to provision, and that some loops will cost Ameritech less than the average (perhaps significantly less) to provision. However, on average, Ameritech's rates will recover the costs associated with provisioning loops. (OSS Proceeding Tr. Vol. V, pp. 1308-09).
- Moreover, in the past, Ameritech's provision of a network access line ("NAL") generally has been considered to provide a customer a voice grade connection between the customer's premises and Ameritech's central office switch serving the customer's assigned local "exchange." More specifically, Ameritech's access line services have been considered to provide a voice grade connection between Ameritech's local exchange switch and the customer's network interface device ("NID"). The NID is a designated point of demarcation that

- Ameritech's proposed new build process would allow Ameritech to maintain its current monthly and nonrecurring rates associated with the provision of a network access line, while at the same time reducing its responsibilities with respect to the amount of network facilities it would be required to provide. In short, pursuant to Ameritech's proposal, its network buildout obligations now would end at the Serving Area Interface ("SAI") the point at which its feeder facilities are connected with its distribution and entrance facilities. Customers in new build situations then would be required to "negotiate" with Ameritech for purposes of paying Ameritech some amount of construction charge before Ameritech will connect them to the network. (Id., at 1310).
- Since Ameritech first filed its construction charges tariff, there has been no Commission oversight with respect to Ameritech's development of the construction charges its customers will be required to pay. This constitutes a significant departure from the objective Commission input, oversight, and approval that has been integral to setting basic local exchange rates in the past.

PROPOSED CONCLUSIONS OF LAW:

- Ameritech's attempt to impose upfront, nonrecurring charges on housing developers and end user customers for facilities Ameritech constructs to connect them to the network is not appropriate.
- Ameritech's proposal to levy construction charges for new builds is a significant departure from the way it currently provides local network access line services. Ameritech's proposal shifts the responsibility for construction of the two most expensive components of its loop network (i.e., its distribution and entrance facilities) from itself to its customers. Several of the conditions included in Ameritech's proposal constitute poor public policy. These conditions include (a) the fact that Ameritech will continue to own facilities for which its customers have provided the majority of the capital investment; and, (b) the fact that Ameritech will be building significantly smaller portions of network for particular customers while charging the same rates it charges today.

- Ameritech's proposed new build process would allow Ameritech to maintain
 its current monthly and non-recurring rates associated with the provision of a
 network access line, while at the same time reducing its responsibilities with
 respect to the amount of network facilities it would be required to provide.
- Ameritech's proposal is an attempt to drastically redefine its responsibilities as a local exchange carrier and to unilaterally discontinue its obligation to serve. In the past, Ameritech's responsibility has been to extend its facilities to serve its customers. It has been compensated for this responsibility via average rates intended to recover its costs over time. Now, Ameritech is proposing that it bear only the responsibility to construct its facilities to the feeder/distribution interface. It then would be the customers' responsibility to install facilities from their premises to the Ameritech network. This is a fundamental shift in responsibility from Ameritech to its customers. Stated otherwise, Ameritech is attempting to foist the risks associated with building the most expensive portion of its network on a per-loop basis (i.e., distribution and entrance facilities) onto its customers, without providing them with the benefits that may accrue from that risk.
- Moreover, Ameritech, after having new facilities paid for by someone else via special construction charges will continue to own them and will profit from them both now and in the future. They will profit now because TELRIC prices include recovery of costs plus a reasonable profit. (11 FCC Rcd 15499, ¶ 29 (1996)). Ameritech also will profit from them in the future because Ameritech, as the owner of the facilities, will have the right to collect revenue over that facility from either a CLEC or, if Ameritech is successful in winning the customer back, an end user customer.
- Ameritech's new build policy also constitutes bad public policy because it allows Ameritech to sidestep this Commission's authority to set depreciation rates and determine the risk adjusted cost of capital. In essence, Ameritech is proposing that the appropriate depreciable life of those facilities placed via "construction charges" is instantaneous (i.e., all investment is recovered before it is deployed) and that the risk adjusted cost of capital associated with funding those investments is so high that Ameritech is unwilling to deploy its capital to build those facilities, but instead is requiring the customer to provide the

Ameritech intends to recover via the "standard allowance," associated with constructing facilities spanning from Ameritech's serving area interface to the customer's premises.

- The placement of the serving area interface is within the sole discretion of Ameritech. Under its current proposal, Ameritech would have an obvious incentive to place its SAI, on a going-forward basis, as close to its own central office as possible. In this way, its customers would be responsible to pay, through up-front construction charges, for larger and larger portions of the loop network. Correspondingly, Ameritech would be required to provide fewer and fewer facilities, but would continue to charge monthly rates that were set when Ameritech provided a significantly larger share of new facilities. Such a circumstance would significantly reduce Ameritech's risks associated with the deployment of its own capital (as it could use the capital of its customers to construct larger portions of its network) while at the same time significantly enhancing its profitability (by reducing the amount of facilities it is required to provide while at the same time maintaining its existing rates).
- Ameritech is required to build new facilities for itself, its retail customers, and CLECs (its wholesale customers) in a nondiscriminatory fashion. The new build process violates that requirement.
- The Commission concludes that Ameritech is permitted to recover from CLECs "new build" costs only through its monthly recurring loop rate.
- Ameritech's monthly recurring rate for an unbundled loop already recovers the costs of the entire unbundled loop, including any portion that may need to be "constructed" whether or not pursuant to a CLEC's request. Ameritech's unbundled loop studies recover the total investments and expenses required to provision a loop in an average situation in Wisconsin rate bands A, B, and C. Since the Ameritech TELRIC loop studies are based on averages, even if Ameritech could show that a loop or, more likely, a small portion of a loop requested by a CLEC in a "new build" situation exhibits significantly different characteristics than the average loop studied in its unbundled loop study which should be highly unlikely there is no need to assume that additional charges are required to fully compensate Ameritech. Indeed, Ameritech's

• Ameritech's monthly recurring loop rate is the appropriate place to recover the costs of constructing Ameritech's network, including those that Ameritech now labels "new build" costs. Ameritech is required to recover all investment related costs, including any construction costs, via a monthly recurring rate that appropriately reflects the portion of the investment used by the CLEC (or any other purchaser) and reflects the time period over which that investment will generate economic value. The most efficient way to reflect these two economic tenets is to recover those investments over time, in an amortized fashion (i.e., via a monthly recurring rate).

ISSUE I(C)(8) - Should Ameritech Wisconsin be permitted to assess charges

for costs of loop conditioning?

CLEC POSITION:

The Commission should conclude that there is no regulatory or economic basis
for Ameritech to assess loop conditioning charges on CLECs, and loop
conditioning rates should be set at zero.

CLEC BRIEF REFERENCES:

- CLEC Initial Brief: I.C.-156 through I.C.-178.
- CLEC Reply Brief: I.C.-29 through I.C.-36.

CLEC TESTIMONY REFERENCES:

- See Vol. 8, pp. 3137-55, Vol. 9, pp. 3430-49 (confidential record) (Starkey Rebuttal).
- See Vol. 10, pp. 4128-44, 4171-81, 4182-85 (Stacy Rebuttal).

- See Vol. 10, pp. 4245-47 (Jackson Rebuttal).
- See Vol. 10, pp. 4252-54 (Jackson Surrebuttal).

PROPOSED FINDINGS OF FACT:

- When Ameritech attempts to recover costs associated with "conditioning" activities, it generally is seeking to recover costs associated with "deloading" copper plant, paring excess bridged-tap and removing other outdated technological equipment such as digital main-line units ("DMAL") from its copper facilities. Ameritech is required to remove this outdated equipment because this equipment interferes with digital transmission and renders xDSL, ISDN, and other digital services largely unusable for digital services provided not only by competitors but also by Ameritech itself on a facility that includes these devices. (Tr. Vol. 8, p. 3150; Tr. Vol. 10, pp. 3521-23, 4128-35).
- In general, removing this equipment is a process by which Ameritech can transition its embedded network from a technology primarily implemented in the late 1960s and 1970s, to a network strategy (the Revised Resistance Design ("RRDS") standard and Carrier Serving Area ("CSA") standard) that was implemented beginning in the early 1980s and largely remains intact today (RRD design standards requires that load coils not be placed on facilities less than 18,000 feet from the central office and substantially limits bridged tap applications). The RRD standard is consistent with digital transmission (indeed, it was instituted largely to accommodate ISDN technology) and if Ameritech actively had transitioned its network over the past 25 years toward this industry standard, it would incur very few conditioning costs when required to accommodate orders from CLECs requesting xDSL capable facilities. (Tr. Vol. 8, p. 3151).
- In nearly every instance, the loop conditioning charges offered in other jurisdictions are substantially lower than what Ameritech proposed in this docket.
- Other ILECs such as Verizon do not seek to recover any costs whatsoever for

PROPOSED CONCLUSIONS OF LAW:

- Using a forward-looking, least-cost network design, no basis exists for
 assessing loop conditioning charges to CLECs because there is little if any
 need to place bridged tap, load coils and repeaters, which inhibit DSL services.
 In the absence of such devices, there obviously is no cost incurred to remove
 them and, therefore, loop conditioning would have associated costs of zero
 dollars. By assessing charges for loop conditioning, Ameritech would be
 double recovering the costs associated with provisioning a forward-looking
 network.
- Ameritech should have developed recurring charges for UNEs based on forward-looking cost standards. The recurring rates for DSL-capable loops are priced based on a network specifically designed so that items such as load coils are not necessary. Therefore, non-recurring costs for loop conditioning serve to double recover the costs associated with a forward-looking network. When a CLEC agrees to pay the monthly recurring rate approved by the Commission consistent with a forward-looking network methodology, the CLEC is paying for a loop that already should be fully capable of providing DSL service. Consequently, Ameritech's additional charges associated with loop conditioning serve only to double recover costs that already are included in the monthly rate.
- Moreover, the loop conditioning charges that Ameritech seeks to charge are
 excessive and inhibit CLECs' ability to provide DSL service. The rates are as
 significant a deterrent to CLECs providing DSL service as the "unconditioned"
 loops themselves.
- This Commission will "allow" recovery of loop conditioning costs only where such costs are (1) calculated in accordance with the FCC's TELRIC rules;
 (2) where such recovery would not result in double recovery; and, (3) where costs are imposed equitably among new entrants. Ameritech's proposed loop conditioning charges violate each of these rules and, therefore, are inappropriate.
- Taken together, the FCC's rules preclude any nonrecurring conditioning

nonrecurring charges at the levels that pose a substantial barrier to entry clearly is not what the FCC intended.

- Any loop conditioning costs recovered must reflect the costs incurred by an
 efficient carrier, managing its existing network in a least-cost manner.
- Ameritech has overstated its costs. A comparison of the rates Ameritech has offered for loop conditioning in other jurisdictions through its multi-state interconnection agreement offering indicates that Ameritech is seeking higher rates in Wisconsin than in any other Ameritech jurisdiction.
- The overstatement of these costs by Ameritech derives from three main areas:
 (1) Ameritech has overstated the times associated with performing loop conditioning tasks; (2) Ameritech has ignored efficiencies associated with conditioning multiple loops; and, (3) Ameritech inappropriately has included charges for restoring bridge taps. Ameritech has ignored efficiencies of which the Commission and Wisconsin consumers expect Ameritech to avail itself. Consequently, as a result of ignoring these efficiencies, the charges for loop conditioning have been grossly overstated. Ameritech's costs should reflect much lower times for completing conditioning tasks, as well as multiple loop conditioning and the elimination of bridged tap restoral.
- Loop conditioning charges, to the extent they are not already recovered in the monthly loop rate, should be recovered through recurring charges. First, large upfront charges erect barriers to entry that competitive carriers are unable to overcome in providing customers new technologies like xDSL (as recognized by the FCC in its UNE Remand Order). Second, the activities that Ameritech has identified as "loop conditioning" are exactly the same types of activities that generally are capitalized in the initial installation of a given loop. The process of removing load coils, removing bridged tap, and removing repeaters fundamentally changes the engineering and costing characteristics of the unbundled loop. By removing these digital "disturbers," Ameritech has in effect provisioned an unbundled loop that is unique to digital transmission, i.e., it has provisioned an xDSL compatible loop.
- Ameritech's attempt to recover all conditioning costs upfront, as opposed to

- the CLEC loses the customer and turns the loop back to Ameritech. In such cases it is much more appropriate that the costs be recovered over time.
- Ameritech's cost studies are based on a DLC configuration so that no loops are supposed to have load coils and other disturbers. In other words, all loops will be presumed to be capable of DSL transmission. Thus, to the extent certain loops do require additional conditioning work in order to in fact be capable of DSL transmission, it is entirely fair to spread the costs of making those loops DSL-capable over all loops since all loops are presumed to be DSL-capable. Since Ameritech's cost study assumes all loops are DSL-capable, the costs of rendering certain loops physically capable of DSL transmission should be spread over all loops and not charged separately to some loops but not others.
- The Commission concludes that the monthly recurring charges for loop conditioning to be assessed to CLECs for each DSL capable loop ordered are:

Loop Conditioning Element	Monthly Rates
<19500 Feet -:	
Removal of Repeaters	\$0.008
Removal of Bridged Tap	\$0.016
Removal of Load Coils	\$0.037
Conditioning Charge	\$.061
≥1/2500 Feet	
Removal of Repeaters	\$0.099
Removal of Bridged Tap	\$0.099
Removal of Load Coils	\$0.099
Conditioning Charge	\$.298

• Ameritech's costs associated with loop conditioning must reflect the costs incurred by an efficient provider. Consequently, the following adjustments must be made:

Loop Conditioning Element	NRC
<17,500 Feet	
Removal of Repeaters	\$0.38
Removal of Bridged Tap	\$0.76
Removal of Load Coils	\$1.80
Conditioning Charge	\$2.95
≥17,500 Feet	
Removal of Repeaters	\$4.83
Removal of Bridged Tap	\$4.83
Removal of Load Coils	\$4.83
Conditioning Charge	\$14.50

- The time during which this recovery occurs should be limited because if Ameritech begins to condition multiple loops, in time, all of the loops that currently are loaded will have been conditioned, and all of the costs incurred will have been recovered. Given the fact that there are a finite number of loops which require conditioning, and a finite amount of costs to be recovered by Ameritech for performing the work associated with conditioning, the time frame over which costs are recovered must be limited to prevent Ameritech from recovering more than what is required in order to cover those costs.
- Accordingly, the Commission limits the effectiveness of the nonrecurring rate to 5 years from the date it goes into effect. Given the demand for DSL services in the state of Wisconsin, 5 years of growth should be sufficient to ensure both that the vast majority of lines available for conditioning have been conditioned and to ensure that Ameritech has recovered the costs associated with conditioning those lines. This also is consistent with the time frame SBC has estimated when its Project Pronto network initiative will be complete.

ISSUE I(C)(9) - Should Ameritech be permitted to assess costs for Loop

Qualification?

CLEC POSITION:

 The Commission should preclude Ameritech from assessing loop qualification costs.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.C.-178 through I.C.-180.

CLEC TESTIMONY REFERENCES:

See Vol. 10, pp. 4166-85 (Stacy Rebuttal).

PROPOSED FINDINGS OF FACT:

 All the information necessary for Ameritech to identify the characteristics of a loop already is contained in Ameritech's databases, or should be.
 Consequently, the forward-looking cost of providing such information to CLECs is de minimus.

PROPOSED CONCLUSIONS OF LAW:

• ILECs are required to provide CLECs with access to all loop information, such as the loop length and the presence of interferors such as load coils, bridged tap, or repeaters for determining the suitability of the loop for purposes of providing xDSL services. (UNE Remand Order, at ¶¶ 427-28). Because the purpose of this requirement is to require CLECs to determine for themselves whether a loop satisfies the prerequisites for the service the CLEC intends to provide (id., at ¶ 430), the ILEC should be compensated only for providing such information to a CLEC in an electronic format and not for costs incurred by the ILEC in interpreting such information for the CLEC. (Id.).

few additional data fields via Ameritech's OSS. Thus, Ameritech is not permitted to recover loop qualification costs.

ISSUE I.D.(1)

(1) How should switching cost inputs be calculated?

CLEC POSITION:

The Commission should analyze Ameritech's increased switching costs within the context of telecommunications being a declining cost industry.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-6 through I.D.-13

CLECs' Reply Brief: I.D.-1 through I.D.-2

CLEC TESTIMONY REFERENCES:

GENERAL TESTIMONY:

The CLECs address switching generally throughout the testimony at Tr. Vol. 6, pp. 2070-2142; 2214-27; 2228-97, and the corresponding confidential testimony (Tr. Vol. 9, pp. 2486-2558; 2593-2606; 2608-2677). Subsequent discussion of switching issues will include references only to specific testimony relating to the particular issue from the issues list.

SPECIFIC TESTIMONY:

See Vol. 6, pp. 2074-80 (CLEC witness Ankum); 2106-14 (Ankum); 2233-34 (Ankum).

PROPOSED FINDINGS OF FACT

• Although telecommunications is a declining cost industry, and the company's internal





 Ameritech's ARPSM model fails to count a significant number of cutover lines, which are much cheaper than growth lines.

PROPOSED CONCLUSIONS OF LAW

- Ameritech's ARPSM model is inconsistent with TELRIC principles because it fails to consider *total* demand.
- Ameritech's ARPSM model is inconsistent with TELRIC principles because it fails to account for savings stemming from telecommunications being a declining cost industry and from the SBC/Ameritech merger.
- As the Michigan Public Service Commission previously found, the same ARPSM model presented by Ameritech here misstates Ameritech's switching costs by overstating the number of more expensive growth lines in Ameritech's network.
- Ameritech must make the CLEC-proposed adjustments to ARPSM in order to calculate proper switching costs under TELRIC principles.

ISSUE I.D.(1)(a)1.

- (a) What is the appropriate contract price to use?
 - 1. Should the prices established in current contracts be used, or would different prices be more reasonable for a complete rebuild?

CLEC POSITION:

The parties agree that the *current* switching contract prices are the appropriate cost inputs to Ameritech's cost studies.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-13 through I.D.-14

CLECs' Reply Brief: I.D.-3

PROPOSED FINDINGS OF FACT

- The parties agree that the appropriate contract prices to use are those found in the current switch vendor contracts.
- ARPSM omits approximately 14 million lines from its analysis, approximately 70% of which are replacement lines, which cost much less than growth lines.

PROPOSED CONCLUSIONS OF LAW

- Ameritech's ARPSM model is inconsistent with TELRIC principles because it fails to consider *total* demand.
- Ameritech's ARPSM model is inconsistent with TELRIC principles because it fails to
 combine the price currently charged for replacement lines and the price currently
 charged for growth lines to compute a single price that a switch vendor would charge
 today if it replace the two-tiered pricing structure with a single per-line price.
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the prices found in the current switch vendor contracts, including applicable discounts.

ISSUE I.D.(1)(a)2.

2. What are the appropriate numbers for growth lines versus replacement lines?

CLEC POSITION:

The Commission should apply the CLEC-proposed growth to replacement line ratio reflected in Confidential Exhibit 57.***

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-14 through I.D.-18

CLECs' Reply Brief: I.D.-3 through I.D.-8

PROPOSED FINDINGS OF FACT

- ARPSM omits approximately 14 million lines from its analysis, approximately 70% of which are replacement lines, which cost much less than growth lines.
- Understating the number of replacement lines results in ARPSM producing artificially inflated switching costs.
- The CLEC-proposed growth to replacement line ratio found in Confidential Exhibit 57 best reflects that most of Ameritech's lines were placed at the cheaper replacement line prices.

PROPOSED CONCLUSIONS OF LAW

- Ameritech's ARPSM model is inconsistent with TELRIC principles because it fails to consider *total* demand.
- As the Michigan Public Service Commission previously found, the same ARPSM model presented by Ameritech here misstated Ameritech's switching costs by overstating the number of more expensive growth lines in Ameritech's network.
- Ameritech must make the CLEC-proposed adjustments to ARPSM in order to calculate proper switching costs.
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the CLEC-proposed growth to replacement line ratio found in Confidential Exhibit 57.

ISSUE I.D.(1)(a)3.

3. What are the appropriate order intervals?

CLEC POSITION:

The Commission should adopt the CLEC-proposed ordering intervals for all switch vendors. (The parties agree on the interval that should be applied to the Lucent contracts, but Ameritech seeks to apply shorter intervals to the remaining switch vendor

CLECs' Reply Brief: I.D.-9

CLEC TESTIMONY REFERENCES:

See Vol. 9, p. 2659-60*** (CLEC witness Ankum); Vol. 3, pp. 642-43***



(Ameritech witness Palmer).

PROPOSED FINDINGS OF FACT

- Ameritech's proposed ordering intervals are irreconcilable with logic and with the amount of spare capacity Ameritech claims to have.
- The parties agree that the CLEC-proposed ordering interval recited at Tr. Vol. 3, p. 643, l. 13*** is appropriate for the Lucent contracts.
- The longest ordering intervals for Nortel and Siemens are the appropriate inputs to ARPSM for these vendors.

PROPOSED CONCLUSIONS OF LAW

- Ameritech's proposed ordering intervals are inconsistent with TELRIC principles.
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the ordering interval for the Lucent contracts interval recited at Tr. Vol. 3, p. 643, l. 13*** and the longest ordering intervals for the Nortel and Siemens contracts.

ISSUE I.D.(1)(a)4.

4. What blending of switch types and manufacturers should be used?

CLEC POSITION:

Whatever the blend of switch types and manufacturers, the Commission should require Ameritech to use the proper contract prices in its studies.

CLEC TESTIMONY REFERENCES:

While the parties were not particularly at issue on the proper mix of switch types and manufacturers (which should be determined by technological demands), it is essential that the appropriate contract prices be used. This means that the Commission should not let Ameritech inflate its costs artificially through using emergency pricing, improper purchasing intervals, inaccurate growth to replacement line ratios, or failing to factor in applicable vendor discounts and incentives.

PROPOSED FINDINGS OF FACT

• (not applicable)

PROPOSED CONCLUSIONS OF LAW

- See proposed conclusions of law at I.D(1); I.D(1)(a)(1) through I.D(1)(a)(3).
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model applying all vendor discounts and incentives.

ISSUE I.D.(1)(a)5.

5. Does the mix of analog and digital lines impact switching costs, and if so, what is the appropriate mix assuming that switching costs are recovered in port charges?

CLEC POSITION:

The Commission should adopt the CLEC-recommended forward-looking mix of 55% digital/45% analog lines.

CLEC BRIEF REFERENCES:

PROPOSED FINDINGS OF FACT

- Ameritech's proposed digital/analog line mixes for each of the equipment vendors are artificially weighted towards analog lines, resulting in inflated switching costs.
- A forward-looking blend of digital/analog lines is 55% digital/45% analog.

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using a 55% digital/45% analog line ratio.

ISSUE I.D.(1)(a)6.

6. What are the appropriate fill factors?

CLEC POSITION:

The Commission should adopt the CLEC-proposed fill factors rather than the actual fills proposed by Ameritech, which are discriminatory and anticompetitive.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-21 through I.D.-24

CLECs' Reply Brief: I.D.-12 through I.D.-13

CLEC TESTIMONY REFERENCES:

See Vol. 6, pp. 2089-91 (CLEC witness Ankum); 2092-95 (Ankum); 2132-33 (Ankum); Vol. 8, p. 3039 (CLEC witness Starkey); Vol. 9, pp. 2655-56***; Vol. 2, pp. 959-60 (Ameritech witness Palmer).

PROPOSED FINDINGS OF FACT

Ameritech's proposed fill factors are based on its actual fills, rather than on a least-

PROPOSED CONCLUSIONS OF LAW

- Ameritech's proposed fill factors are inconsistent with TELRIC principles.
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using fill factors adjusted according to the CLECs' recommendations by setting fills based on the efficient use of facilities, consistent with a forward-looking, least-cost methodology, eliminating the CCS fill factor and allowing for only a reasonable amount of spare.

ISSUE I.D.(1)(a)7.

7. What depreciation lives and salvage factors should be used?

CLEC POSITION:

The Commission should use the FCC-approved depreciation lives and salvage factors.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-24

CLECs' Reply Brief: I.D.-14

CLEC TESTIMONY REFERENCES:

See Vol. 6, pp. 2139-42 (CLEC witness Ankum).

PROPOSED FINDINGS OF FACT

• The digital switch depreciation life used in Ameritech's ULS-ST study is unreasonable because Ameritech's switch vendor contracts reflect deployment schedules showing the installation of the same type of switches at the beginning and end of a seven-year period through the year 2003, demonstrating that Ameritech and its vendors believe that the switches have a much longer useful life than reflected in

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the FCC-approved economic lives and salvage factors.

ISSUE I.D.(1)(a)8.

8. What maintenance factors should be used?

CLEC POSITION:

The Commission should reduce Ameritech's proposed maintenance factors according to CLEC recommendations.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-25 through I.D.-26

CLECs' Reply Brief: I.D.-14 through I.D.-15

CLEC TESTIMONY REFERENCES:

See Vol. 8, pp. 2864-75 (CLEC witness Behounek); Vol. 9, pp. 2999-3010*** (Behounek).

PROPOSED FINDINGS OF FACT

- Ameritech's methodology for calculating its maintenance factors is flawed because it applies yearly increases to its expenses far in excess of the current inflation rate while failing to take productivity increases into consideration.
- Ameritech's methodology for calculating its maintenance factors is flawed because it fails to account for increases in the investment base due to network growth, resulting in an overstated expense numerator and an understated investment denominator.
- Ameritech's methodology for calculating its maintenance factors is flawed because it
 includes maintenance and repair expenses for equipment that is beyond its economic
 life, resulting in maintenance factors that are contrary to forward-looking, mostefficient TELRIC principles

reasonable maintenance factors.

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the CLEC-proposed adjustments to Ameritech's maintenance factors found at Confidential Tr. Vol. 9, pp. 3009-10.***

ISSUES I.D.(1)(a)9. & 10.

- 9. How should the cost of right-to-use fees be addressed?
- 10. Should the revenue ready fees be used as inputs in the model and, if so, how?

CLEC POSITION:

The Commission should apply the right-to-use ("RTU") fees and revenue ready ("RR") fees pursuant to the terms of the switching contracts, and not as manipulated by Ameritech in ARPSM.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-26

CLECs' Reply Brief: I.D.-15 through I.D.-16

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue, but rather, made their arguments based upon the testimony of Ameritech witness William Palmer. The CLECs noted that although the RTU fees appear in the vendor contracts only for replacement lines, Ameritech has spread the RTU fees over all lines using weighted averaging on an estimated per switch basis. (Tr. Vol. 2, pp. 703-04). This improper blending of lines



vendor contracts, rather than as "levelized" by Ameritech. (See Tr. Vol. 2, p. 705)

(Palmer's testimony describing the "levelizing" of the fees).

PROPOSED FINDINGS OF FACT

• Ameritech's "levelizing" of the RTU and RR fees results in increasing these fees above their actual level.

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model by applying RTU and RR fees as provided in the vendor contracts.

ISSUE I.D.(1)(a)11.

11. Should the "in plant" factors that Ameritech uses be used as inputs in the model and, if so, how, or are all installation costs included in the contract price for the switch?

CLEC POSITION:

The Commission should not use Ameritech's in-plant factors as inputs to

ARPSM.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-26 through I.D.-27

CLECs' Reply Brief: I.D.-16

CLEC TESTIMONY REFERENCES:

See Vol. 9, pp. 3360-65*** (CLEC witness Starkey).

PROPOSED FINDINGS OF FACT

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model after eliminating in-plant factors as inputs to the model.

ISSUES I.D.(2)(a)1. & 2.

- (2) Line Port issues
 - (a) Should usage charges apply in addition to a per port charge?
 - 1. What costs vary with usage?
 - 2. What costs do not vary with usage?

CLEC POSITION:

The Commission should not apply usage charges on top of a per-port charge, because switching costs do not vary with usage. If the Commission does choose to adopt Ameritech's updated usage charge, the flat rated port charge must be updated pursuant to Dr. Ankum's adjustments to Ameritech's models.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-27 through I.D.-40

CLECs' Reply Brief: I.D.-16 through I.D.-21

CLEC TESTIMONY REFERENCES:

See Vol. 6, pp. 1918-19 (cross examination of Ameritech witness Aron); 2100-02 (CLEC witness Ankum); 2117-20 (Ankum); 2129-31 (Ankum); 2218-19 (Ankum); 2286 (Ankum); 2254 (Ankum); Vol. 9, pp. 2539-45*** (Ankum); 2605*** (Ankum); 2638-39*** (Ankum); 2650-53*** (Ankum); 2665*** (Ankum); Ex. 62*** (Ankum); Ex.

PROPOSED FINDINGS OF FACT

- The appropriate way to recover the costs of unbundled local switching is through a flat, per-line port charge with no additional usage charge.
- The CLEC-proposed adjustments to ARPSM will result in a reasonable flat-rated port charge.
- Ameritech's contracts with its switch vendors do not support a usage-based charge because they do not contain any usage-based, CCS-based or MOU-based costs, nor any other provisions that would result in Ameritech incurring usage-sensitive switching costs.
- Ameritech's switches are installed with sufficient capacity to accommodate all usage, and Ameritech is only charged when it orders new facilities to accommodate line growth.
- A reasonable, upper-limit, flat-rated port charge is calculated as shown in the table found at Confidential Tr. Vol. 9, p. 2665.***
- The Illinois Commerce Commission has adopted precisely this sort of flat-rated port charge in its February 17, 1998 Order in ICC Dockets 96-0486 and 96-0569.
- In addition to the flat rated port charge, the charges shown in the table at Confidential Tr. Vol. 9, p. 2605,*** reflecting the CLEC-proposed adjustments to ARPSM and NUCAT are reasonable.
- Ameritech's witnesses William Palmer and Debra Aron have previously supported the use of flat-rated switching charges.

ALTERNATE PROPOSED FINDINGS OF FACT:

The CLECs submit that the proposed findings of fact above are appropriate, because the Commission should not adopt a port charge with a usage element. However, in the event that the Commission decides to adopt Ameritech's updated usage charge, the CLECs propose the following alternate findings of fact:

- It is reasonable to apply the CLEC-proposed digital/analog line mix to reflect a forward-looking network.
- It is reasonable to eliminate the CCS fill factor and apply the CLEC-proposed fill factors for other facilities.
- It is reasonable to apply the cutover discounts to CCS prices in the same manner as they are applied to other parts of the switch.
- In addition to the flat rated port charge, the charges shown in the table at Confidential Tr. Vol. 9, p. 2606,*** reflecting the CLEC-proposed adjustments to ARPSM and NUCAT, are reasonable in light of the application of a bifurcated switching charge.

PROPOSED CONCLUSIONS OF LAW

- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model after eliminating all usage-based charges as inputs to the model.
- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the CLEC-proposed adjustments, resulting in a reasonable, flat-rated port charge.
- Under TELRIC principles, a reasonable, upper-limit, flat-rated port charge is \$2.74.
- In addition to the flat-rated port charge, under TELRIC principles, the adjustments to ARPSM and NUCAT shown in the table at Confidential Tr. Vol. 9, p. 2605*** must be applied:

ALTERNATE PROPOSED CONCLUSIONS OF LAW:

The CLECs submit that the proposed conclusions of law above are appropriate, because the Commission should not adopt a port charge with a usage element. However, in the event that the Commission decides to adopt Ameritech's updated usage charge, the CLECs propose the following alternate conclusions of law:

• Under TELRIC principles, Ameritech must apply the CLEC-proposed growth to

line mix to reflect a forward-looking network.

- Under TELRIC principles, Ameritech must eliminate the CCS fill factor and apply the CLEC-proposed fill factors for other facilities.
- Under TELRIC principles, Ameritech must apply the cutover discounts to CCS prices in the same manner as they are applied to other parts of the switch.
- In addition to the flat rated port charge, under TELRIC principles, the charges shown in the table at Confidential Tr. Vol. 9, p. 2606, reflecting the CLEC-proposed adjustments to ARPSM and NUCAT, must be applied in light of the application of a bifurcated switching charge.

ISSUE I.D(2)(b)

(b) What are the standard features that should be included in the cost of a basic port and how are the costs for these features to be calculated?

CLEC POSITION:

TELRIC principles should govern the costs of a basic port, the features of which are MDF/DSX, intercept, telephone number, directory, report processing, and product, network, general and corporate overhead. The parties are in agreement on this list of features.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-40 through I.D.-41

CLECs' Reply Brief: I.D.-21 through I.D.-22

CLEC TESTIMONY REFERENCES:

See Vol. 6, pp. 2129 (CLEC witness Ankum); 2285 (Ankum).

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requirements to be used to develop cost studies and pricing determinations in this docket.

PROPOSED CONCLUSIONS OF LAW

 The prices for MDF/DSX, intercept, telephone number, directory, report processing, and product, network, general and corporate overhead must be determined under TELRIC principles.

ISSUES I.D(2)(c)1. through 7.

- (c) Is it appropriate to load the costs for the following items onto the port and, if so, have the costs been appropriately calculated in Ameritech's model?
 - 1. Main distribution frame
 - 2. Telephone number
 - 3. Call intercept
 - 4. Directories
 - 5. Methods and procedures development
 - 6. Report processing
 - 7. Billing systems development

CLEC POSITION:

Ameritech has inappropriately loaded the costs for the items detailed above onto the port.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-41

CLECs' Reply Brief: I.D.-22

CLEC TESTIMONY REFERENCES:

See Vol. 6, p. 2130 (CLEC witness Ankum); Vol. 9, p. 2665*** (Ankum); Ex.



procedures development, report processing and billing systems development.

• It is unreasonable to load the costs for main distribution frame, telephone number, call intercept, directories, methods and procedures development, report processing and billing systems development onto Ameritech's proposed line port charge.

PROPOSED CONCLUSIONS OF LAW

• In order to make Ameritech's line port charge consistent with TELRIC principles, Ameritech must eliminate the loadings for the costs for main distribution frame, telephone number, call intercept, directories, methods and procedures development, report processing and billing systems development.

ISSUE I.D(2)(d)

(d) What are the cost differences between different types of ports and the basic port and how should these costs be calculated?

CLEC POSITION:

The line port charge should be flat-rated without any usage element. The trunk port charge is properly usage-based and should be calculated on a minute-of-use basis.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-41

CLECs' Reply Brief: I.D.-22

CLEC TESTIMONY REFERENCES:

The CLECs based their position upon the testimony on and discussion of Issues I.D(2)(a)1. & 2., supra.

PROPOSED FINDINGS OF FACT

• See the CLECs' proposed findings of fact for Issues I.D(2)(a)1. & 2.

ISSUE I.D(3)

(3) What adjustments need to be made to calculate tandem switching costs?

CLEC POSITION:

The Commission should adjust Ameritech's tandem switching costs by correcting the inflated distance assumptions contained therein according to the CLECs' recommendations.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.D.-42 through I.D.-44

CLECs' Reply Brief: I.D.-22 through I.D.-23

CLEC TESTIMONY REFERENCES:

See Vol. 6, p. 2220 (CLEC witness Ankum); 2222-25; Vol. 9, p. 2600***

(Ankum); 2602-04*** (Ankum).

PROPOSED FINDINGS OF FACT

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- Ameritech's NUCAT model contains several errors relating to the reasonable call distances to factor into the model.
- It is reasonable to use different average call distances for two distinct types of calling blended transport for local calling and common transport for access calls.
- To adjust for the errors in Ameritech's NUCAT model, it is reasonable to accept the CLEC-proposed percentage reduction listed at Confidential Tr. Vol. 9, p. 2604, l. 11*** in the distance that Ameritech assumes local calls traverse, on average, from the tandem to the end office and again from the end office back to the tandem.

ISSUE I.E(1)(a)

- E. Transport Related Issues
 - (1) Trunk Port Issues
 - (a) What fill factors are appropriate to convert DS1's to DSO's?

CLEC POSITION:

The Commission should apply the fill factor reflected in Confidential Exhibit

58*** to trunk port investments.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-2

CLECs' Reply Brief: I.E.-1 through I.E.-2

CLEC TESTIMONY REFERENCES:

See Ex. 58.

PROPOSED FINDINGS OF FACT

- Using Ameritech's proposed fill factors for trunk port investments would result in a double-counting of costs since the per trunk price already includes spare.
- Ameritech's proposed fill factor for line side DS1 port is inconsistent with the delivery intervals found in the switch vendor contracts.
- The CLEC-proposed fill factor reflected in Confidential Exhibit 58*** for both trunk side trunk ports and line side SD1 trunk ports is reasonable and avoids the double counting of costs that results from the fills used in ARPSM.

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run the model using the fill factor reflected in Confidential Exhibit 58*** for both trunk

CLEC POSITION:

The CLEC-advocated growth estimates are appropriate. Ameritech's initial brief stated that it has now adopted the CLECs' approach to this issue and will rerun its cost study based on the CLECs' assumption that the best measure of forward-looking trunk quantities is the amount of inter-office usage that is anticipated. (*See* Ameritech Initial Brief at p. 278).

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-3

CLECs' Reply Brief: I.E.-2

CLEC TESTIMONY REFERENCES:

See testimony referenced under I.C(2)(a)1. through 4. and I.D(1)(a)6. (relating to fill factors and growth); see also testimony reference under I.D(1)(a)2. and 2.a. (relating to the impact of growth on the growth/cutover line ratio).

PROPOSED FINDINGS OF FACT

- The CLEC-advocated growth estimates are appropriate.
- Ameritech agrees with and has adopted the CLECs' growth estimates and has agreed
 to rerun its cost studies based on the CLECs' assumption that the best measure of
 forward-looking trunk quantities is the amount of interoffice usage that is anticipated.

PROPOSED CONCLUSIONS OF LAW

In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run its cost studies based on the CLEC-advocated growth estimates and the CLECs' assumption that the best measure of forward-looking trunk quantities is the amount of

CLEC POSITION:

The blend of vendor equipment should be consistent with TELRIC principles.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-3

CLECs' Reply Brief: I.E.-2

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue.

PROPOSED FINDINGS OF FACT

• (not applicable)

PROPOSED CONCLUSIONS OF LAW

• In order to make ARPSM consistent with TELRIC principles, Ameritech must assume the use of the most efficient technology in weighting the blend of vendor equipment, and weight the least expensive switches more heavily.

ISSUE I.E(1)(d)

(d) What blend of cutover and growth lines is appropriate for trunks?

CLEC POSITION:

The CLEC-advocated cutover/growth blend for line ports is also applicable to that for trunk ports.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-4

PROPOSED FINDINGS OF FACT

The parties agree that the appropriate growth/replacement line ratio for trunk ports should parallel that for line ports.

PROPOSED CONCLUSIONS OF LAW

• See I.D(1)(a)2.

ISSUES I.E(2)(a) through (c)

- (2) What are the cost components of dedicated transport and how are these costs calculated?
 - (a) What are the forward-looking technologies and equipment configurations to use?
 - (b) What costs are incurred for customized routing?
 - (c) What loadings onto the costs are appropriate to calculate a price?

CLEC POSITION:

The various cost components for dedicated transport outlined in Ameritech Wisconsin's cost studies are appropriate, with the CLEC-proposed adjustments. The appropriate forward-looking technologies and equipment configurations should be consistent with TELRIC principles. The CLEC recommendations for shared and common markup in their discussion of Issue I(B)(2) constitute appropriate loadings for calculating a price for dedicated transport.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-4

CLECs' Reply Brief: I.E.-3



PROPOSED FINDINGS OF FACT

- The CLEC-proposed adjustments to the cost components making up Ameritech's dedicated transport rates are reasonable.
- The CLEC-proposed adjustments to Ameritech's shared and common markup are reasonable, as they constitute appropriate loadings for calculating a price for dedicated transport.

PROPOSED CONCLUSIONS OF LAW

- In order to make ARPSM consistent with TELRIC principles, Ameritech must re-run its cost studies based on the CLEC-proposed adjustments to the cost components making up Ameritech's dedicated transport rates.
- The CLEC-proposed adjustments to Ameritech's shared and common markup are the appropriate loadings for calculating a price for dedicated transport.
- The costing for dedicated transport must be consistent with TELRIC principles.

ISSUE I.E(3)

(3) What are the costs components for shared or common transport and how are these calculated?

CLEC POSITION:

The Commission should require Ameritech to adjust its NUCAT model to adjust for the impacts of certain flaws in its assumptions.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-5

CLECs' Reply Brief: I.E.-3 through I.E.-4

CLEC TESTIMONY REFERENCES:

fails to represent fairly its switch vendor prices, uses fictitious CCS investments, assumes an unreasonably large increase in peak switch usage, assumes an unreasonably low percentage of digital lines, and fails to use FCC-approved economic lives and salvage values.

PROPOSED CONCLUSIONS OF LAW

• In order to make NUCAT consistent with TELRIC principles, Ameritech must re-run its model based on the CLEC-proposed adjustments to remedy for the fact that Ameritech does not account for the anticipated SBC/Ameritech merger savings, fails to use the TELRIC methodology consistently, uses actual fills rather than efficient fills, fails to represent fairly its switch vendor prices, uses fictitious CCS investments, assumes an unreasonably large increase in peak switch usage, assumes an unreasonably low percentage of digital lines, and fails to use FCC-approved economic lives and salvage values.

ISSUE I.E(3)(a)

(a) What, if any, costs differ from dedicated transport?

CLEC POSITION:

The individual component costs for shared or common transport do not differ from those for dedicated transport. Shared transport costs are recovered on a usage-sensitive basis, while dedicated transport costs are recovered on a flat-rated basis. The parties agree on this issue.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-5 through I.E.-6

CLECs' Reply Brief: I.E.-4

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue.



For both shared and dedicated transport, the individual cost components are the same.

PROPOSED CONCLUSIONS OF LAW

- Under TELRIC principles, the costs of shared transport should be recovered on a usage-sensitive basis.
- Under TELRIC principles, the costs of dedicated transport should be recovered on a flat-rated basis.

ISSUE I.E(3)(b)

(b) What loadings onto the costs are appropriate to calculate a price?

CLEC POSITION:

The CLECs' shared and common costs markup encompasses the appropriate loadings to the shared transport costs. The parties agree that the shared and common cost markup should be applied, but disagree on what it should be.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-6

CLECs' Reply Brief: I.E.-4

CLEC TESTIMONY REFERENCES:

See testimony referenced under I.B(2) (relating to CLEC-proposed adjustments to Ameritech's joint and common cost loading factor).

PROPOSED FINDINGS OF FACT

The parties agree that the shared and common cost markup should be applied as the reasonable loading for shared transport costs.



ISSUE I.E(3)(c)

(c) How should the cost of shared transport be recovered?

CLEC POSITION:

The costs of shared transport are expressed on a minute-of-use basis, and should be recovered the same way.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-6

CLECs' Reply Brief: I.E.-4

CLEC TESTIMONY REFERENCES:

See Vol. 6, p. 2219 (CLEC witness Ankum).

PROPOSED FINDINGS OF FACT

• The parties agree that the costs of shared transport are expressed on a minute-of-use basis, and should be recovered the same way.

PROPOSED CONCLUSIONS OF LAW

- Under TELRIC principles, the costs of shared transport should be recovered on a minute-of-use basis.
- See proposed conclusions of law listed at I.D(3).

ISSUE I.E(4)

(4) Based on the terms of the dark fiber offering as agreed to in the stipulation in the OSS case (6720-TI-160), what are the cost components for dark fiber, how are these costs calculated and what is the appropriate price?

CLECs' Reply Brief: I.E.-5

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue.

PROPOSED FINDINGS OF FACT

• (not applicable)

PROPOSED CONCLUSIONS OF LAW

• (not applicable)

ISSUE I.E(4)(a)

(a) What cost factors differ from dedicated transport?

CLEC POSITION:

Electronics to "light" the fiber are the key area where dark fiber costs differ from those for dedicated transport. The parties agree on this issue.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-7

CLECs' Reply Brief: I.E.-5

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue.

PROPOSED FINDINGS OF FACT

The parties agree that the difference in the costs of dark fiber and dedicated transport is attributable to the inclusion of the electronics needed to "light" the fiber in the instance of dark fiber.



ISSUE I.E(4)(b)

(b) What criteria should be used to determine when dark fiber must be made available?

CLEC POSITION:

The FCC criteria in the UNE remand order are the appropriate criteria for determining when dark fiber must be made available.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-7 through I.E.-8

CLECs' Reply Brief: I.E.-5

CLEC TESTIMONY REFERENCES:

The CLECs did not present testimony on this issue, instead relying upon legal argument.

PROPOSED FINDINGS OF FACT

• (not applicable)

PROPOSED CONCLUSIONS OF LAW

- 47 C.F.R. § 51.319(d) mandates that "[a]n incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to interoffice transmission facilities on an unbundled basis to any requesting telecommunications carrier for the provision of telecommunications service."
- 47 C.F.R. § 51.319(d)(1)(B) further defines interoffice transmission facility network elements to include "dark fiber transport, defined as incumbent LEC optical transmission facilities without attached multiplexing, aggregation or other electronics".

Ameritech Wisconsin must provide non-discriminatory access to dark fiber on an unbundled basis to any requesting CLEC.

ISSUE I.E(4)(c)

(c) What loadings onto the costs are appropriate to calculate a price?

CLEC POSITION:

The CLECs' proposed joint and common cost markup encompasses the appropriate loadings to the dark fiber costs.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-8

CLECs' Reply Brief: I.E.-5 through I.E.-6

CLEC TESTIMONY REFERENCES:

See testimony referenced under I.B(2) (relating to CLEC-proposed adjustments to Ameritech's joint and common cost loading factor).

PROPOSED FINDINGS OF FACT

- The parties agree that the shared and common cost markup should be applied as the reasonable loading for shared transport costs.
- The CLECs' proposed shared and common cost markup is reasonable.

PROPOSED CONCLUSIONS OF LAW

• See proposed conclusions of law listed at I.B(2).

ISSUE I.E(4)(d)

fill factor and its joint and common cost markup.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.E.-8

CLECs' Reply Brief: I.E.-6

CLEC TESTIMONY REFERENCES:

See testimony referenced under I.B(2) (relating to CLEC-proposed adjustments to Ameritech's joint and common cost loading factor) and I.C(2)(a) (relating to the CLEC-proposed fiber feeder fill factor).

PROPOSED FINDINGS OF FACT

- Ameritech's general methodology for setting the rates for dark fiber is reasonable when coupled with the implementation of the CLEC-proposed adjustments to Ameritech's fiber feeder fill factor and its joint and common cost markup
- It is reasonable to use a fiber feeder fill factor of 67%.
- The CLEC-proposed adjustments to joint and common cost markup are reasonable.

PROPOSED CONCLUSIONS OF LAW

- Under TELRIC principles, the rates for dark fiber should be determined by using Ameritech's general methodology for setting these rates, as adjusted by using the CLEC-proposed fiber feeder fill factor of 67% and the CLEC-proposed adjustments to joint and common cost markup.
- See proposed conclusions of law listed at I.B(2).

ISSUE I(F) – How should switching and termination costs be allocated between setup and usage for reciprocal compensation?

CLEC POSITION:

- The Commission should not attempt to determine switching and termination costs as caused by setup and usage as regard for reciprocal compensation based on the record in this proceeding. Ameritech has utterly failed to properly establish those costs which are related to setup and those which are related to usage. Ameritech, contrary to the Commission's order in Docket No. 6720-TI-160 has failed to provide cost causation driven calculations, but rather has taken its existing reciprocal compensation study and merely allocated the costs contained therein based on unreasonable and inappropriate factors.
- Based on the FCC's intervening order in CC 96-98 and CC 99-68 setting an interim rate for ISP reciprocal compensation, CLECs believe that there is little reason to continue with the bifurcated rate structure. The FCC has adopted a single rate for ISP traffic that does not allow for the bifurcated structure ordered by this Commission in Docket 05-TI-283. Further, as of this date filing of this Reply, Ameritech has not made the election as to exchanging all 251(b)(5) traffic at the rates set forth in paragraph 89 of the FCC order. Unless and until Ameritech makes a hinding election are accurated the rate of the rate of the recommendation of the recommendation of the rate of the rate

make the election contemplated by the FCC order by a date certain. After that election is made, the Commission may then proceed to determine an appropriate methodology for reciprocal compensation for non-ISP traffic, and to the extent necessary, ISP traffic, if Ameritech does not elect the rates in the FCC order. In any event, it is most logical for this Commission to abandon the bifurcated rate structure in favor of a single rate structure which is consistent with that ordered by the FCC. This could be accomplished either by an order in this Docket, or by re-opening Docket 05-TI-283.

CLEC BRIEF REFERENCES:

• CLEC Initial Brief: I.F.-2 through I.F.-7.



• CLEC Reply Brief: I.F.-1 through I.F.-2.

CLEC TESTIMONY REFERENCES:

- See Vol. 6, pp. 2183-96, Vol. 9, pp. 2562-75 (confidential record) (Ankum Direct).
- See Vol. 10, pp. 4247-49 (Jackson Rebuttal).

PROPOSED FINDINGS OF FACT:

Ameritech's Reciprocal Compensation study combines call duration costs and the call setup costs. Ameritech has not identified "costs" following the cost causation process that is essential to the TELRIC methodology. Instead, Ameritech has used the traditional method – developed in the old Part 32 and

- The 24.13% allocator clearly is marked within the Ameritech cost study as being derived from separations. This clearly shows that the Ameritech study is not a TELRIC study. Further, the 24.13% represents nonconversation times, which includes far more than call setup.
- In response to a data request, Ameritech admitted that it has not identified call setup equipment:

CLEC Coalition Set 6, Request #1:

In ARPSM, please identify all pieces of switch equipment associated with call setup. For those pieces of equipment identified, please provide specific Tabs and cell references.

Response:

The Ameritech Regional PIP Switching Model (ARPSM) is the application of the single price methodology to the terms of the PIP contracts. The model calculates a single, average price of the various products sold through these contracts. It does not identify individual equipment associated with call setup. (Emphasis added).

- The average duration of a call is 6.51 minutes (See Reciprocal Compensation Study, Excel, Tab 8). Thus, if call setup is 24.13%, then according to Ameritech call setup would be 1.57 minutes. (1.57 = 24.13% times 6.51 minutes.) This is impossible. It does not take 1.57 minutes to set up a call.
- It is clear that Ameritech artificially has inflated the call setup "costs" by allocating additional usage related investment costs in an effort to reduce the call duration costs.

PROPOSED CONCLUSIONS OF LAW:

• In its Order Establishing a Method for Pricing Reciprocal Compensation in Interconnection Agreements, Investigation of the Compensation Arrangements

- The Commission did not address conversation time and non-conversation time, which are different concepts from call setup costs and duration costs. Contrary to the Commission's explicit orders to separately identify call setup investments and costs and call duration investments and costs (ISP Order, at 13, 16-17), Ameritech's Reciprocal Compensation study still combines call duration costs and the call setup costs.
- The FCC has mandated that UNE pricing be based on the TELRIC methodology that rigorously follows cost causation. Under TELRIC, cost should be identified following the cost causation principle. Under the cost causation principle, specific investments are categorized and identified as being associated with certain activities or functionalities. Any investments that are unrelated to the activity or functionality at hand are excluded. Then, having identified the relevant investments and only those investments costs are determined by applying annual charge factors, for such cost components as depreciation, cost of capital, maintenance, etc. It is essential, however, to continuously relate investments and costs on a cost causative basis. The FCC made cost causation one of the corner stones of the TELRIC methodology:

Any function necessary to produce a network element must have an associated cost. The study must explain with specificity why and how specific functions are necessary to provide network elements and how the associated costs were developed. Only those costs that are incurred in the provision of the network elements in the long run shall be directly attributable to those elements. Costs must be attributed on a cost-causative basis. Costs are causally-related to the network element being provided if the costs are incurred as a direct result of providing the network elements, or can be avoided, in the long run, when the company ceases to provide them.

• The Commission ordered Ameritech to continue rates in the most recent version of interconnection agreements between Ameritech and competitive providers until the company has complied with the Commission's ISP Order.

ISSUE I(F)(1) - Should switching costs be recovered in a different manner for

unbundled switching than for the switching portion of reciprocal

ISSUE I(F)(3) – What are the appropriate duration costs?

• See above.

ISSUE I(F)(4) — What loadings onto the setup and duration costs are appropriate to determine prices?

• See above.

ISSUE SUMMARIES

ISSUE I.G.(1)

- I.G. Nonrecurring Costs Issues/Costs Associated with Initiating, Discontinuing and General Provisioning Related Issues
 - (1) Whose nonrecurring cost model should be used, Ameritech's model or the CLEC's model (NRCM)? Include supporting reasons based on identified strengths and weakness of the two models.
 - (a) If the Ameritech model is selected:
 - 1. What inputs should be adjusted and why?
 - 2. Are there any other adjustments that should be made to nonrecurring costs?
 - (b) If the CLEC model is selected:
 - 1. What inputs should be adjusted and why?
 - 2. Are there any other adjustments that should be made to nonrecurring costs?

CLEC POSITION:

The Commission should use the CLEC's nonrecurring cost model (NRCM), sponsored by Steven Turner, to determine Ameritech Wisconsin's nonrecurring costs.

The NRCM, which has been adopted or relied upon in proceedings around the country, is superior in all respects to Ameritech's nonrecurring cost model. The NRCM applies forward-looking, long-run economic cost principles and assumes a network engineered using forward-looking technologies and efficient processes.

Ameritech's nonrecurring cost studies suffer from multiple flaws, including: (1) failure to evaluate nonrecurring costs from a process perspective; (2) failure to utilize a forward-looking network architecture in developing nonrecurring costs; (3) failure to

relied upon with any confidence in this proceeding. Not surprisingly, the net effect of these flaws is to inappropriately inflate the UNE rates that Ameritech charges CLECs.

If the Commission decides to use Ameritech's nonrecurring cost model, then it must order that Ameritech first implement the adjustments and corrections recommended by CLEC witness Mr. Turner.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.G.-1 through I.G.-2; I.G.-5 through I.G.-7; I.G.-19 through I.G.-20; I.G.-26 through I.G.-28.

CLECs' Reply Brief: I.G.- 2 through I.G.- 5; I.G.-12 through I.G.-15.

CLEC TESTIMONY REFERENCES:

See generally Vol. 10, pp. 3555-3926 (CLEC witness Turner, Public); Vol. 11, pp. 3932-4118 (CLEC witness Turner, Confidential). See specifically Vol. 10, pp. 3638, 3645-3647, 3689-3695, 3697, and 3754-3756.

PROPOSED FINDINGS OF FACT

- Nonrecurring costs are onetime costs for activities required to initiate or provide wholesale services, interconnection, or unbundled network elements. More specifically, nonrecurring costs are onetime costs associated with establishing, disconnecting, or rearranging a communications service at the request of a customer.
- OSS are the electronic, software driven computer programs and databases that
 telecommunications companies use to manage the functions of preordering,
 ordering, provisioning, repair, maintenance, and billing processes for both their
 retail and wholesale operations. OSS assumptions are important to the
 development of a nonrecurring cost model because OSS have a very significant
 impact on nonrecurring costs because the major drivers of nonrecurring costs are

- electronically; (3) an efficient OSS environment with unpolluted databases to minimize fallout; (4) electronic provisioning where possible; (5) POTS services are non-designed services; and (6) OSS investment and maintenance costs are recovered in recurring rates.
- The NRCM develops cost estimates for the different nonrecurring functions by identifying and estimating the associated costs of each activity that will be performed by an ILEC when a CLEC requests a wholesale service, interconnection, and/or an unbundled network element. By identifying and estimating costs associated with each activity, the NRCM develops a "bottoms-up" estimate of nonrecurring costs. (Tr. Vol. 10, p. 3653.)
- The NRCM methodology is straightforward. First, all of the activities required to complete a Local Service Request are identified and listed. Second, for each activity, based on the consensus of the NRCM panel of experts, an estimate is provided of the amount of time (in minutes) required to perform each activity. Third, once the activity time has been determined, the work group associated with that type of labor is incorporated to determine what the labor cost would be. Fourth, since some activities may not have to be performed in all instances (for example, some activities that are required when using an unbundled copper loop are not required when using an unbundled fiber loop), the Model also incorporates the probability of an activity happening. A panel of experts, each having decades of relevant telecommunications experience, collectively discussed and reached consensus on the activities, probabilities, and work time estimates included in the Model. A labor rate expert, working with all the technical experts to determine the appropriate class of labor associated with each activity, helped develop the labor rates. Fifth, the NRCM calculates the cost of each of the activities comprising a NRC Element Type using the following formula: Activity Cost = Activity Probability * Time (Minutes) * Rate (\$/Hour) / 60. Sixth, the Model sums the costs of the activities for each element type and then applies a variable overhead factor to convert the calculated cost to a price proposal. This input represents the loading factor for variable overhead expenses not already captured in the Model. The value of this user-adjustable input is 10.4 percent. (Tr. Vol. 10, p. 3654.)
- The NRCM calculates preordering, ordering, provisioning, and disconnecting nonrecurring costs for 49 Network Element types. The NRCM assumes the efficient operation of the typical ILEC OSS (Legacy systems) architecture that currently exists within the industry. (Section 15 of the NTAB further defines the

- have fallout rates of one percent. It was the consensus of the experts that existing OSS, when operated and maintained efficiently as SWBT currently is operating and maintaining its EASE system should experience fallout rates of that magnitude. The NRCM experts recognized, however, that while a 1% fallout rate is a reasonable objective that should be achieved in most situations, it might not be fully achieved in all instances and therefore agreed to use a fallout rate of 2%.
- The forward-looking fallout rate is based on the use of OSS that currently are available to all ILECs. If the OSS and associated databases are operated and maintained efficiently, then the ILEC's existing systems would have fallout rates of about 2%. Therefore, the forward-looking fallout rate of 2% is much closer to the fallout rate that would prevail in an efficient, competitive market. (Tr. Vol. 10, p. 3656.)
- The NRCM further assumes the use of forward-looking, currently available technologies. Specifically, the NRCM is based on the use of Local Digital Switches, GR-303 IDLC for loops served by a fiber feeder, DCS, SONET rings for transport, and a low profile, punch down block main distributing frame ("MDF") for terminating copper loops in the central office. These technologies are important because they use intelligent processor controlled network elements that can communicate over standard interfaces to the OSS in such a manner that little or no human intervention is required for provisioning and maintenance activities.
- Regarding Nonrecurring Costs For Customer Migration, each element type is
 discussed extensively in the Non-Recurring Cost Model Technical Assumptions
 Binder attached to Mr. Turner's testimony as Appendix SET-5. The NRCM
 calculates non-recurring cost for 11 unique migration element types:

Type 1: POTS/ISDN BRI Migration (TSR)

Type 3: POTS/ISDN BRI Migration (UNE Platform)

Type 6: POTS/ISDN BRI Migration (UNE Loop)

Type 10: 4 Wire Migration (UNE Loop)

Type 13: 2 Wire Migration at the FDI

Type 15: 4 Wire Migration at the FDI

Type 17: 2 Wire Migration at 6 Line NID

Type 24: 2 Wire Loop, Different CO MigrationType 27: 4 Wire Loop, Different CO Migration

network. The NRCM takes into consideration that there are two network configurations to connect this customer to the CLEC's network – Copper and GR-303 IDLC. The NRCM also assumes that the Outside Plant and NID are in place, or dedicated, and the cost associated with constructing these are recovered in the recurring rates. The NRCM does account for the manual activity to cross-connect a 2-wire copper loop at the Central Office (CO). If service is to be provisioned using GR-303 IDLC, electronic cross-connects will be made at the remote terminal to the CLEC channelized DS1 which has been provisioned from the CLEC's collocated space to the remote terminal. It is also assumed that travel to a non-staffed office may be required.

- Times were established for both architectures. Once times were established, they were weighted to 40% and 60% for copper twisted wire pair and GR-303 IDLC, respectively. This weighting is a user-adjustable input to the Model. Copper is generally used for loop feeder lengths of 9000 feet or less and GR-303 IDLC is used for loop feeder lengths greater than 9000 feet. (Tr. Vol. 10, p. 3659.)
- For copper loops, the NRCM assumes the central office technician will pull and analyze the order. It then assumes placement of a cross connect wire between the customer's cable pair and the CLEC's equipment and a continuity test on the customer's cable pair before and after making his/her connection, insuring the service is correct. The NRCM assumes once the frame connections are made the central office technician will have to close out the order in the OSS.
- The cost modeling recognizes that the new entrant will purchase channelized DS1 capacity (virtual feeder) at the remote terminal for IDLC. In addition, the Model assumed labor rates associated with Non-Designed 2-wire loops. The Model did not assume Circuit Provisioning Center ("CPC") or Special Services Centers ("SSC") because these centers are not associated with 2-wire loops.
- If an order does fall out in the ILEC's provisioning process, the NRCM estimates the costs associated with the manual time required to resolve fallout problems. The time to analyze and resolve the problem by a technician is 17.5 minutes, which is an average work time for the activities being performed. (Tr. Vol. 10, p. 3660.)
- There is a difference in the costs calculated by the Model when an end user customer is migrated to a new entrant using unbundled elements purchased in combination. When a new entrant purchases UNEs in combination, e.g., Loop

- Where an order does fall out, the Model assumes that an OSS will clear some problems without manual intervention, again resulting only in the cost for processing time. In addition, the NRCM estimates the costs associated with the manual time required to resolve fallout problems. The time to analyze and resolve the problem by a technician is 17.5 minutes, which is an average work time for the activities being performed.
- For a platform migration, all necessary facilities, including Inside Plant at the Central Office, are assumed to be in place, or dedicated and therefore cross-connect activity is not modeled. In addition, the provisioning process would not need to negotiate for release of the customer's facilities before the migration, as would be the case for migration of only the customer's loop.
- The nonrecurring costs for installing a two-wire loop for basic service (POTS) or for an Integrated Services Digital Network/Basic Rate Interface ("ISDN/BRI") loop are the same because virtually the same ILEC activities are required. Using existing systems, the only difference between provisioning these loops from an OSS standpoint is that the order for a basic two-wire loop would flow to the Telcordia Memory Administration Recent Change ("MARCH") system and the order for an ISDN BRI loop would flow to the Architel ASAP system. Both MARCH and ASAP are designed to update the switch automatically. (Tr. Vol. 10, p. 3661.)
- Appendix SET-8 to Mr. Turner's testimony is a depiction of the network elements that would be used to provide an unbundled two-wire copper loop. The assumptions are as follows: In order to isolate those costs that are appropriately considered non-recurring, the cross connection for the unbundled loop assumes that Dedicated Outside Plant ("DOP") and the Network Interface Device ("NID") are in place and thus there is no incremental cost associated with cross connections at the Feeder Distribution Interface ("FDI") and customer premises. The costs for installing the drop and NID as well as the associated cross connect costs at the FDI are included in the recurring rates for unbundled loops. Hence, the only cross connect costs modeled as non-recurring costs are the ones at the Main Distribution Frame ("MDF").
- The NRCM recognizes that travel to a non-staffed office is periodically required. The Model also assumes that when a technician travels to the non-staffed offices, he or she will perform more than one activity (e.g., general maintenance, routines, additional provisioning activities) during that visit. The default values used in the

- The disconnect costs are modeled separately to allow the new entrant the ability to either retain the loop or to completely disconnect the copper connection. The disconnect time for removal of an existing cross connect at the MDF in the central office is estimated at thirty seconds, half the time taken to establish the original cross connect.
- When both copper twisted pair and GR-303 IDLC technologies are used in the loop architecture, the NRCM weights the cost of each based on an estimate of the number of loops residing on copper feeder and the number of loops residing on a fiber feeder (e.g., GR-303 IDLC). Once the weighting is completed, the results for Wisconsin are displayed on the control panel of the Model. The MDF crossconnects for loops from a copper feeder are performed manually while the loops from an IDLC are cross connected electronically. Appendix SET-9 to Mr. Turner's testimony depicts the network elements used to provide an unbundled loop using GR-303 IDLC.
- Appendix SET-10 to Mr. Turner's testimony describes DS1 and DS3 schematics. The technical cost modeling assumptions for Interoffice Transport, including DS1, DS3 and DS1 grooming within the DS3 are as follows. *First*, the non-recurring cost model assumes that SONET rings for interoffice transport are the proper forward-looking technology, that such rings are in place and active, and that DS1 and DS3 capacity are virtual paths over the SONET ring. SONET ring technology has consistently proven to be financially advantageous for network planning and operations savings and is supported by its widespread deployment by all of the major ILECs. In addition, the features provided by SONET products include robust survivability, restoration, remote management, and proactive monitoring. (Tr. Vol. 10, p. 3663.)
- Second, forward-looking Digital Cross Connect System/Electronic Digital Signal Cross Connect (DCS/EDSX) technology was assumed, based on its remote network grooming, reconfiguration and provisioning capabilities, automatic failure restoration, enhanced performance monitoring, built-in testing, and remote test access capabilities. With the use of EDSX/DCS, M1/3 Multiplexers can be avoided. Moreover, DSX panels, manual cross connects, adjunct test equipment or performance monitoring equipment are unnecessary since they are incorporated in the DCS/EDSX. Finally, the EDSX/DCS cross connects are performed electronically and will take approximately 50 milliseconds for CPU processing time with an acknowledgment response within 2 seconds per Telcordia specifications.

- Disconnect occurs when a service to a customer is ended. While Ameritech in its
 model presents installation NRC charges to include the cost of disconnection, the
 NRCM separates installation and disconnection for costing and pricing purposes.
 This reflects cost causation. Moreover, the disaggregation of installation and
 disconnect costs and prices also allows the new entrant the ability to benefit from
 the long standing and efficient practices with respect to Dedicated Inside Plant
 ("DIP") and Dedicated Outside Plant ("DOP").
- The DIP and DOP processes allow for rapid activation or deactivation of services at an end user location without the need for physical disruption of the facility because, with DIP and DOP, physical connections remain in place and only a command from the OSS to the network element is necessary to activate or deactivate the service. If a new entrant chooses to have service deactivated using only software commands, disconnection NRCs become almost non-existent. Ameritech's, like all efficient ILECs', current disconnect policy adheres to this practice of DIP and DOP in order to provide immediate service activation to the next customer at that premise. Thus, by modeling the installation separately from disconnection, the new entrant would have the same benefits from the DIP and DOP processes as does the ILEC. (Tr. Vol. 10, p. 3665.)
- On the other hand, the CLECs' witness Mr. Turner contends that Ameritech's model does not address the distinction between a new unbundled loop and a migration. This distinction has many ramifications. To give one example: If a loop is already in service for Ameritech with its retail customer and a CLEC orders the migration of that working loop to the CLEC at its collocation cage, this is yet again, a different process than the new add or migration of a loop-switch port combination described above. In this instance, the primary work is a record function on Ameritech's part, but Ameritech must also cross-connect this loop to the CLEC's collocation arrangement if it is copper fed into the central office. Similarly, Ameritech can electronically cross-connect this loop to the CLEC's collocation arrangement if it is fiber fed into the central office.
- These are not new processes. When Ameritech implements service for one of its end-user customers, the facilities and all functionality of that customer's service (e.g., loop and port) would have been inventoried in Ameritech's OSS. This committed inventory practice is known as DIP and DOP. Ameritech has modeled physical disconnection and re-installation of service. Alternatively, Ameritech's DIP and DOP processes allow for rapid activation or deactivation of services at an end user location without the need for physical disruption of the facility. (Tr. Vol.

practice of DIP and DOP in order to provide immediate service activation to the next customer at that premise. In some states, this is even required by the Commission as "warm line" service. If a new entrant chooses to have service deactivated using only software commands, disconnection NRCs become almost non-existent.

- The NRCM is designed to account for various process contexts in which an unbundled element or combination of unbundled elements is ordered by the CLEC.
- When Ameritech provisions new service for its retail customer, Ameritech charges service order charges and/or retail rates that were intended to recover the upfront cost of establishing the customer's service. When that customer migrates its loop and switch port to a CLEC, Ameritech is not required to perform any field work to make this migration occur only an electronically sent and processed records change is required.

PROPOSED CONCLUSIONS OF LAW

- The FCC's Local Competition Order (In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 (Aug. 8, 1996) mandates the use of TELRIC principles to develop cost studies and to set prices for UNEs.
- Adopting a pricing methodology (i.e., TELRIC) based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market. FCC Order, ¶ 679. Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels. Id.
- A nonrecurring cost model should apply forward-looking long-run economic cost principles by assuming a network engineered using forward-looking technologies and efficient processes.
- A nonrecurring cost model should apply the use of the ILEC's efficient, fully integrated operations support systems (OSS), which are accessible to CLECs and permit them to transact business with the ILEC via an electronic interface.

and efficient processes.

- The NRCM develops cost estimates for the different nonrecurring functions by identifying and estimating the associated costs of each activity that will be performed by an ILEC when a CLEC requests a wholesale service, interconnection, and/or an unbundled network element. By identifying and estimating costs associated with each activity, the NRCM appropriately develops a "bottoms-up" estimate of nonrecurring costs.
- Ameritech's model does not consistently apply forward-looking long-run economic principles, nor does it assume in all instances a network engineered using forward-looking technologies and efficient processes.
- Ameritech's nonrecurring cost model suffers from multiple flaws, including: (1) failure to evaluate nonrecurring costs from a process perspective; (2) failure to utilize a forward-looking network architecture in developing nonrecurring costs; (3) failure to incorporate the concept of flow-through via efficient OSS into its development of nonrecurring costs; and (4) failure to incorporate efficient processes into the development of its nonrecurring costs.
- Ameritech's model does not address the distinction between a new unbundled loop and a migration. This distinction has many ramifications. To give one example: If a loop is already in service for Ameritech with its retail customer and a CLEC orders the migration of that working loop to the CLEC at its collocation cage, this is yet again, a different process than the new add or migration of a loop-switch port combination described above. In this instance, the primary work is a record function on Ameritech's part, but Ameritech must also cross-connect this loop to the CLEC's collocation arrangement if it is copper fed into the central office. Similarly, Ameritech can electronically cross-connect this loop to the CLEC's collocation arrangement if it is fiber fed into the central office. It is the fact that Ameritech has failed to make any of these distinctions in its cost study instead assuming that every element must be individually added new each time that causes its costs to be inflated and its cost studies to be unusable by this Commission.
- When Ameritech implements service for one of its end-user customers, the facilities and all functionality of that customer's service (e.g., loop and port) would have been properly inventoried in Ameritech's OSS. This committed inventory practice is known as DIP and DOP. Ameritech's modeled non-

- Ameritech's cost study cannot easily be corrected to adjust for these problems.
 The CLECs' NRCM, however, is designed to account for these various process
 contexts in which an unbundled element or combination of unbundled elements is
 ordered by the CLEC.
- By arguing that it should be entitled to the nonrecurring charge for each of the elements, even in a migration order, Ameritech is effectively asking this Commission to permit it to recover costs twice for which it only performed the work once. When Ameritech provisions the new service for its retail customer, Ameritech charges service order charges and/or retail rates that were intended to recover the upfront cost of establishing the customer's service. When that customer migrates its loop and switch port to a CLEC, Ameritech is not required to perform any field work to make this migration occur only an electronically sent and processed records change is required. As such, if Ameritech charges for any nonrecurring activities specifically associated with the unbundled loop or with the unbundled switch port, it would be double charging for work that it already recovered from the retail customer. Ameritech is not entitled to this double-recovery.
- The CLECs' NRCM corrects the faulty assumptions that have been found in Ameritech's cost studies. In sum, the NRCM incorporates the following principles:

A forward-looking cost model should incorporate the efficiencies of automated OSS, which provide for maximum electronic flow through of orders.

To the extent fallout does indeed occur, it should be limited to approximately 2% of the total orders processed.

Manual work times should reflect appropriate intervals based on the use of forward-looking network technologies.

Where appropriate, service orders should be processed through a non-designed POTS provisioning process as opposed to a more expensive designed services process.

A forward-looking cost model should incorporate the efficiencies of automated Intelligent Network Elements (SONET, GR-303 IDLC, DCS/EDSX, LDS, etc.)

Only costs for activities that cannot be reused for future customers should be included as a nonrecurring cost.

Installation and disconnection should be calculated separately to account for significant cost differences dependent on a new entrant's disconnect decisions regarding DIP/DOP.

• The Commission should adopt the results of the CLECs' Nonrecurring Cost Model as provided in Appendix SET-11 to Mr. Turner's testimony.

ISSUE I.G.2

- I.G. (2) Should disconnection costs be included in upfront installation costs?
 - (a) If so, what expected life should be used in determining the frequency of disconnection costs?

CLEC POSITION:

Disconnect occurs when a service to a customer is ended. While Ameritech in its model calculates installation nonrecurring charges to include the cost of disconnection, the CLECs' NRCM separates installation and disconnection for costing and pricing purposes. This distinction properly reflects cost causation. Moreover, the disaggregation of installation and disconnect costs and prices also allows the new entrant the ability to benefit from the long standing and efficient practices with respect to Dedicated Inside Plant ("DIP") and Dedicated Outside Plant ("DOP").

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.G.-18 through I.G.-23, and I.G.-27.

CLECs' Reply Brief: I.G.-5 through I.G.-7.

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PROPOSED FINDINGS OF FACT

- The DIP and DOP processes allow for rapid activation or deactivation of services at an end user location without the need for physical disruption of the facility. With DIP and DOP, physical connections remain in place and only a command from the OSS to the network element is necessary to activate or deactivate the service. If a new entrant chooses to have service deactivated using only software commands, disconnection NRCs become almost non-existent. Ameritech's current disconnect policy adheres to this practice of DIP and DOP in order to provide immediate service activation to the next customer at that premise. Thus, Mr. Turner testified, by modeling the installation separately from disconnection, the new entrant would have the same benefits from the DIP and DOP processes as does the ILEC. (Tr. Vol. 10, p. 3665.)
- Ameritech also includes disconnect costs in its UNE NRCs, which have already been recovered by Ameritech through its retail service offering. In fact, with DIP and DOP, physical connections remain in place and only a command at a computer from the OSS to the network element is necessary to activate or deactivate the service. Ameritech's current disconnect policy adheres to this practice of DIP and DOP in order to provide immediate service activation to the next customer at that premise. In some states, this is even required by the Commission as "warm line" service. If a new entrant chooses to have service deactivated using only software commands, disconnection NRCs become almost non-existent.

PROPOSED CONCLUSIONS OF LAW

- The CLECs' NRCM separates installation and disconnection for costing and pricing purposes. This distinction properly reflects cost causation. Ameritech's model makes no such distinction, instead calculating installation nonrecurring charges to include the cost of disconnection. The NRCM's disaggregation of installation and disconnect costs and prices also allows the new entrant the ability to benefit from the efficient practices with respect to Dedicated Inside Plant ("DIP") and Dedicated Outside Plant ("DOP").
- Ameritech also improperly includes disconnect costs in its UNE NRCs, which
 have already been recovered by Ameritech through its retail service offering.
 Ameritech should not be permitted such double recovery.

CLEC POSITION:

The Commission should adopt the overhead loading factor of 10.4% used by CLEC witness Mr. Turner in the NRCM. Alternatively, the Commission could, based upon CLEC witness Mr. Behounek's analysis, set Ameritech's overhead loading rate at the percentage calculated at Tr. Vol. 11, p. 4349, Exh. 69. See Findings of Fact and Conclusions of Law under Issues I.B.(2)-(4), above. Under the NRCM, the overhead loading rate is a "user-adjustable input," so any Commission desired modification can be easily accommodated. As described above, the NRCM sums the costs of the activities for each element type and then applies a variable overhead factor to convert the calculated cost to a price proposal. This input represents the loading factor for variable overhead expenses not already captured in the Model.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.G.-6 through I.G.-12.

CLECs' Reply Brief: I.G.-1 through I.G.-6.

CLEC TESTIMONY REFERENCES:

See Vol. 10, pp. 3654-3655. (CLEC witness Turner)

PROPOSED FINDINGS OF FACT

• Based upon Mr. Turner's analysis, the CLECs conclude that the Commission should set Ameritech's joint and common cost mark-up at 10.4%. The CLECs also believe that it would not be unreasonable to use the percentage calculated at Tr. Vol. 11, p. 4349, Exh. 69. Ameritech's proposed joint and common cost mark-up is nearly three times larger than the CLECs' proposed mark-up.

PROPOSED CONCLUSIONS OF LAW

• The CLECs' recommendation that the Commission should set Ameritech's joint and common cost mark-up at 10.4% is reasonable and supported by the record and FCC orders. Ameritech Wisconsin's proposed joint and common cost mark-up, which is nearly three times larger than the CLECs', is unreasonable and not supported by the record or FCC orders. Indeed, Ameritech's mark-up is discriminatory and anti-competitive in that it results in substantially higher, non-cost based UNE prices.

ISSUES I.G.(4)-(6)

- I.G.(4) Are there costs associated with combining network elements?
 - (a) If so, how should those costs be determined?
 - (b) If so, how should those costs be recovered by Ameritech?
- I.G.(5) What are the costs associated with providing an "existing combination?"
 - I.G.(6) What are the costs associated with providing an "ordinarily combined" collection of UNEs?

CLEC POSITION:

The CLECs provided extensive analysis and recommendations with respect to installation, migration and disconnect costs for the UNE platform. CLEC witness Mr. Turner presented the cost results (\$0.25) for each of these three situations in his Appendix SET-11, lines 3-5. (Exhibit 93, Tr. 3555.) His accompanying testimony explained the significance and derivation of these costs. (Tr. 3655, 3657, 3660-3661.) The CLECs' evidence has not been rebutted and must be approved.

When faced with an analogous situation, the Michigan Commission adopted

UNE platform migration tariff rate that has helped to enhance the competitive climate in that state. ² This Commission should do the same.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.G.-1 through I.G.-8; I.G.-12 through I.G.-20.

CLECs' Reply Brief: I.G.-5 through I.G.-9, I.G.-14.

CLEC TESTIMONY REFERENCES:

See Vol. 10, pp. 3555, 3637-3647, 3655-3661, 3689, 3748, 3751-3753, and 3756-

3757 (CLEC witness Turner).

PROPOSED FINDINGS OF FACT

- The CLECs provided extensive analysis and recommendations with respect to installation, migration and disconnect costs for the UNE platform. CLEC witness Mr. Turner presented the cost results (\$0.25) for each of these three situations in his Appendix SET-11, lines 3-5. (Exhibit 93, Tr. 3555.) His accompanying testimony explained the significance and derivation of these costs. (Tr. 3655, 3657, 3660-3661.)
- When faced with an analogous situation, the Michigan Commission adopted migration costs developed by the NRCM, the same model presented by the CLECs here.³

PROPOSED CONCLUSIONS OF LAW

• The CLECs provided extensive analysis and recommendations with respect to installation, migration and disconnect costs for the UNE platform. CLEC witness Mr. Turner presented the cost results (\$0.25) for each of these three situations in his Appendix SET-11, lines 3-5. (Exhibit 93, Tr. 3555.) His accompanying testimony explained the significance and derivation of these costs. (Tr. 3655, 3657, 3660-3661.) The CLECs' evidence has not been rebutted and must be approved.⁴



- When faced with an analogous situation, the Michigan Commission adopted migration costs developed by the NRCM, the same model presented by the CLECs here. Those model results provided the analytic cost support for the current \$0.35 Michigan UNE platform migration tariff rate that has helped to enhance the competitive climate in that state.
- The CLECs' proposed costs for installation, migration, and disconnect are consistent with TELRIC principles and are reasonable for adoption in this proceeding.

<u>ISSUES I.H.(1)-(4)</u>

(1) What types of collocation arrangements should be required?

CLEC POSITION:

The Commission should require Ameritech Wisconsin to offer the CLECs the six forms of collocation available in the industry today: (1) Caged Physical Collocation; (2) Virtual Collocation; (3) Common Collocation; (4) Cageless Collocation; (5) Adjacent Physical Collocation – On-Site; and (6) Adjacent Physical Collocation – Off-Site. The FCC's Advanced Services Order supports these forms of collocation.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.H.-1 through I.H.6; I.H.-12 through I.H.-25; I.H.-36 through I.H.-40.

CLECs' Reply Brief: I.H.-6 through I.H.-9.

CLEC TESTIMONY REFERENCES:

See generally Vol. 10, pp. 3555-3926 (CLEC witness Turner, Public); Vol. 11, pp. 3932-4118 (CLEC witness Turner, Confidential). See specifically Vol. 10, pp. 3598, 3613, 3685-3688, 3721-3722, and 3728.

PROPOSED FINDINGS OF FACT

• Collocation is the means by which a CLEC places telecommunications equipment in a space such that the competitor may acquire access to Ameritech's unbundled network elements and interconnection to Ameritech's network. The space may be within Ameritech's central office within a cage area, or within the existing telecommunications equipment line-ups of Ameritech, or it may be outside of

provides its own maintenance.

- Virtual Collocation is a means by which the CLEC places its telecommunications
 equipment side-by-side with Ameritech's own telecommunications equipment.
 Although the competitor purchases its telecommunications equipment, it transfers
 title of the equipment to Ameritech. As such, Ameritech is responsible for the
 collocated equipment, including providing for the maintenance.
- Common Collocation is almost identical to Caged Physical Collocation with one minor difference. Instead of each competitor having its own separate collocation cage, the competitors share a "common" collocation cage. In other words, the competitors are still responsible for providing maintenance for their equipment and will continue to gain direct access to it. However, all of the competitors will be placed within the same collocation cage with no separation between them.
- Cageless Collocation is almost identical to virtual collocation with one significant difference. With virtual collocation, the competitor is not permitted to work on its own equipment, and must transfer title for its equipment to Ameritech. This creates several problems, the chief of which is that the competitor must then pay to train Ameritech to perform maintenance on the competitor's equipment. Cageless Collocation permits the competitor to still place its equipment side-by-side with Ameritech's telecommunications equipment. However, the competitor is permitted to perform its own maintenance on the telecommunications equipment, mitigating the need to train Ameritech's technicians. (Tr. Vol. 10, p. 3571.)
- Adjacent Physical Collocation comes in two varieties: (1) Adjacent Physical Collocation On-Site, and (2) Adjacent Physical Collocation Off-Site. Adjacent Physical Collocation effectively provides for physical collocation except that it does so outside of the confines of Ameritech's telecommunications central office. In the case of the On-Site variety, the Adjacent Physical Collocation occurs on Ameritech's property as close as possible to the central office exterior wall. Interconnection cabling is run from Ameritech to the telecommunications equipment provided by the competitor housed just outside of Ameritech's central office. Additionally, DC power is provided to the competitor. In the case of the Off-Site variety, the Adjacent Physical Collocation occurs beyond Ameritech's property; however, it should still be as close as possible. In this scenario, only interconnection cabling is run from Ameritech to the telecommunications equipment provided by the competitor.

Report and Order, ¶585, et seq.

- Section 251(c)(6) of the Act defines collocation as "the duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements ..." See also 47 C.F.R. §51.323(k)(1).
- The FCC's Advanced Services Order supports the six forms of collocation used in the industry today. First Report and Order and Further Notice of Proposed Rulemaking, Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Dkt. No. 98-147 (March 31, 1999)("Advanced Services Order").
- In its Advanced Services Order, the FCC expressly encouraged all ILECs to explore a wide variety of collocation arrangements and to adopt, where technically feasible, the "best [collocation] practices" of other ILECs to promote competition. See ¶45. Thus, federal law creates the presumption that the collocation terms, conditions, and arrangements being offered by SWBT in Texas, for example, are technically feasible here in Wisconsin.
- We further note that the FCC recently ordered additional collocation requirements with which Ameritech Wisconsin must comply. *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications* Capability, Fourth Report and Order, CC Docket No. 98-147 (rel. August 8, 2001), ¶ 12.

ISSUE I.H. (2)

Whose collocation model should be used as a basis of determining collocation costs, Ameritech's model or the CLECs model (CCM)? Include supporting reasons based on identified strengths and weakness of the two models.

CLEC POSITION:

The CLEC's collocation cost model ("CCM") should be adopted by the

Commission as the basis for determining collocation costs. The CCM's subject matter

expert team determined that the most appropriate method to develop the Model would be

equipment. "Best practices" also assume that Ameritech would make decisions relating to collocation of a competitor at Ameritech's central office on the same basis as Ameritech's decisions for placing its own equipment, and that of its affiliates. (Tr. Vol. 10, p. 3579.)

CLEC witness Mr. Turner identified various deficiencies in Ameritech's Physical Collocation, Cageless Collocation, and Virtual Collocation cost studies. In sum, the shortcomings in Ameritech's cost filing are of such a fundamental nature that this Commission cannot rely on it to fairly evaluate Ameritech's collocation costs. Moreover, Mr. Turner testified that the costs Ameritech did produce do not cover all of the relevant forms of collocation necessary to engender competition in the local exchange market.

If the Commission decides to use Ameritech's collocation cost model, then it must order that Ameritech first implement the adjustments and corrections identified by Mr. Turner.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.H.-1 through I.H.-40.

CLECs' Reply Brief: I.H.-1 through I.H.-10.

CLEC TESTIMONY REFERENCES:

See generally Vol. 10, pp. 3555-3926 (CLEC witness Turner, Public); Vol. 11, pp. 3932-4118 (CLEC witness Turner, Confidential). See specifically Vol. 10, pp. 3570-3595, 3667-3675, and 3713-3717.

background in central office space planning, cable engineering, power engineering, outside plant design, and other areas pertinent to collocation. (Tr. Vol. 10, p. 3570.)

- The CCM determines the investment and operating costs that would be incurred by an efficient incumbent to provide collocated space in its central office, using forward-looking technology that is currently available. (Tr. Vol. 10, p. 3596.)
- The CCM team included an investment associated with building space and, separately, the investments associated with HVAC, floor covering, security, and other items that often are provided as part of the charge for space in a building.
- The source that the CCM team used for the per square foot cost of building space, R. S. Means, is a data sourcebook widely used in the industry. The data provided are compiled from submissions from incumbents who actually have constructed central offices. (Tr. Vol. 10, pp. 3593-3594.)
- The CCM addresses incumbent security concerns by including the cost of security access cards for controlled access by competitor representatives into the central office. The Central Office Model Layout assumes the central office is equipped with an automated security card reading system. The investment associated with the automated security card reading system is separately identified. This is consistent with the forward-looking, least cost approach of the CCM.²
- Investments that are incurred for the benefit of a single collocator and that cannot be used by subsequent occupants of the collocation space are treated by the CCM as nonrecurring costs. Investments that are shared by more than one competitor and/or can be used by subsequent occupants of the same collocation space are treated as recurring costs that would be paid for on a monthly basis by the collocators. (Tr. Vol. 10, p. 3598.)
- The CCM calculates both the monthly capital costs and the monthly operating expenses that Ameritech would incur in efficiently providing collocation space on a recurring basis. These are reflected in the cost outputs of the CCM. In converting these investments to monthly costs, the CCM incorporates a cost of capital that

¹ Mr. Turner participated on the subject matter expert team to construct a technical model for physical collocation of competitor equipment in incumbent's central offices. He worked extensively with the team on all components of the Collocation Cost Model. As the first step, the team constructed a forward-looking

compensates Ameritech for both the time value of money and the business risk it incurs. In addition, the CCM includes a user-adjustable "occupancy adjustment factor" to explicitly recognize that each collocation space provided in the collocation area model layout may not be fully occupied over its economic life. Use of this factor has the effect of increasing monthly costs to account for those time-periods in which a collocator may not occupy the collocation space.

- The costs reflected in the CCM's Summary Cost sheet are categorized as either nonrecurring or monthly recurring costs. Costs are represented in a "cafeteria-style" menu format. The total cost for collocation space is dependent upon the requirement for elements such as connectivity, usage of power, and number of cages required by a competitor at a particular location. This format also encourages efficient use of collocation arrangements by enabling the collocator to "choose" the specific arrangements it needs for a central office-specific arrangement.
- Virtual collocation is an arrangement that allows a CLEC to place its own telecommunications equipment in an area of a central office currently used by Ameritech to house its equipment (and not segregated from incumbent equipment). In both physical and virtual collocation, the CLEC uses the same equipment, and performs similar tasks at least outside of the central office. The difference lies in ownership with implications for maintenance responsibility. In physical collocation, the competitor holds title to the equipment and is responsible for maintaining that equipment. In virtual collocation, once the equipment is installed, the title is transferred to Ameritech. The security and maintenance of the equipment is the responsibility of Ameritech. Ameritech charges the competitor for these services. (Tr. Vol. 10, p. 3601.)
- Virtual collocation is important because, like physical collocation, it provides a means by which new entrants can concentrate traffic from unbundled loops (or other unbundled elements) in order to transport that traffic to the competitor's switch. A competitor may wish to use virtual collocation if it lacks sufficient customer demand to justify a physical collocation arrangement, or because physical collocation cage construction costs render that method of collocation too costly. In addition, Section 251(c)(6) of the Telecommunications Act of 1996 requires that an incumbent provide virtual collocation when physical collocation is not practical for technical reasons or because of space limitations.
- The CCM team developed their recommended costs for virtual collocation as follows.

 As with Physical Collocation, the subject matter export team determined to the

points within the central office to incorporate these distances into cost calculations within the cost models that are distance-sensitive; and (2) to determine the investments associated with constructing the central office itself. These aspects of the Central Office Model Layout are directly relevant to the cost development for both Physical and Virtual Collocation. (Tr. Vol. 10, p. 3603.)

- The CCM team used Wisconsin-specific investment costs and inputs for Ameritech.³ The Virtual CCM includes all investments that Ameritech must make in order to provide virtual collocation to the CLEC. Investments made by the competitor, itself, are not included in the CCM. The CCM includes investments for initial connectivity cabling, but does not include investments for power or grounding cabling. Power and grounding cables are part of the equipment installation paid for by the competitor, because they are necessary to ensure the equipment is operational, functional and ready to accept connectivity cabling. Because power and grounding cables are installed (and paid for by the competitor) at the time the competitor's equipment is installed, Ameritech requires no initial investment for power and grounding cabling.
- The CCM calculates both the monthly capital costs and the monthly operating expenses that Ameritech would incur in efficiently providing virtual collocation on a recurring basis to include items such as taxes, general support investment, and common costs. Additionally, in converting these investments to monthly costs, the CCM incorporates a cost of capital that compensates Ameritech for both the time value of money and the business risk it incurs. (Tr. Vol. 10, p. 3611.)
- The costs reflected in the CCM's Summary Cost sheet are categorized as either nonrecurring or monthly recurring costs. As with physical collocation, costs are represented in a "cafeteria-style" menu format. The total cost for virtual collocation is dependent upon the requirement for elements such as connectivity, usage of power, and rack space required by a competitor at a particular location. This format also encourages efficient use of collocation arrangements by enabling the collocator to "choose" the specific arrangements it needs for a central office-specific arrangement. (Tr. Vol. 10, p. 3613.)
- Common Collocation is similar to Physical Collocation in that a competitor's equipment is placed in a segregated area of the central office. In this form of collocation, however, the equipment of multiple collocators may be placed in the same segregated area. The principal difference between this form of collocation and Physical Collocation is that the internal cage partitions are eliminated; CLECs remain segregated from Ameritech however.

Ameritech's central office without reserving space that the competitor may never need. Second, Common Collocation has a significant advantage over Physical Collocation in that it permits a more efficient use of the telecommunications space. Specifically, the internal walls within the collocation area that divide it into 100 square foot areas reduce the number of relay racks that can be installed. The walls themselves take up space and break the equipment lineups into smaller and less efficient sections.

- Common Collocation has three unique attributes making its cost development and recovery different from that of Physical Collocation: (1) There are no internal cage partitions within the Common Collocation area; (2) rather than recovering the investment associated with Common Collocation through a per square foot element, the cost is recovered through a per linear foot basis, and (3) the placement of cabinetized relay racks has been assumed in developing the per linear foot costs for Common Collocation.
- Much like Virtual Collocation, Cageless Collocation involves the placement of the competitor's equipment within Ameritech's equipment lineups without using a segregated area of the central office. The only difference between Cageless Collocation and Virtual Collocation is that a cageless collocator retains ownership and control of the collocated equipment. Three ramifications result from this ownership status. First, the competitor becomes responsible for the physical maintenance of the equipment rather than having Ameritech technicians perform the work as in the case of Virtual Collocation. Second, because Ameritech will not be performing any maintenance on the virtually collocated equipment, there will be no need for incumbent personnel to be trained in maintaining the competitor's equipment. Third, a security escort may be required where electronic card access is not available. (Tr. Vol. 10, p. 3617.) This is because the competitor will be responsible to perform the on-site maintenance of the equipment that is placed in a Cageless Collocation arrangement. (Tr. Vol. 10, p. 3619.)
- From a cost perspective, there is no difference between Cageless Collocation and Virtual Collocation. Although there are separate output sheets for Cageless Collocation and Virtual Collocation in the CCM, there are no differences in the costs that have been developed for the two options. Effectively, the difference in these two options is one of terms and conditions, not cost. As such, the explanation provided above regarding the development of costs for Virtual Collocation applies for Cageless Collocation with the terms and conditions exceptions as noted.

- The WIC is placed within four feet of the outside wall of the central office. Two holes in the central office are used to route cables to the WIC, one for power and the other for fiber and copper, which are carried in separate cable racks. The competitors draw power from the central office. However, fusing is self-provided in the WIC. Thus, in contrast to the physical collocation model, Ameritech's BDFB is replaced by self-provided competitor equipment, and the power distribution element (from the BDFB to the collocator's equipment) is replaced by self-provided cabling. (Tr. Vol. 10, p. 3621.)
- Of the changes to the CCM necessary to implement Adjacent Physical Collocation On-Site, the most substantial was in developing the distances associated with this collocation option. In determining the cable lengths, the subject matter experts had to assume a range of positions in which the telecommunications trailer outside of Ameritech's central office could be placed. Specifically, the subject matter experts determined that the outside wall of the telecommunications trailer would be within four feet of the outside wall of Ameritech's central office. Second, the subject matter experts determined that the telecommunications area within Ameritech's central office would have common walls with the exterior walls of Ameritech's central office on two sides of the building. On the other two sides of Ameritech's central office, it was assumed that there would be "administrative" areas between the exterior wall of Ameritech's central office and the nearest exterior wall of the telecommunications space. (Tr. Vol. 10, p. 3624.)
- Similar to Physical Collocation and Virtual Collocation, planning and implementation of a collocation area adjacent to Ameritech's central office requires manpower effort on the part of Ameritech. To ensure fair and reasonable compensation for incumbent manpower, the central office model layout incorporates a planning component outlining the expected incumbent manpower requirements to implement a competitor collocation request using best practice processes in a competitive environment. Ameritech resource requirements have been separated into manpower required to establish the initial collocation area and manpower requirements to implement each competitor request. The first competitor request includes both requirements.
- The Adjacent Physical Collocation Off-Site arrangement occurs when the competitor's telecommunications equipment is not located on the central office property. In this form of collocation, the competitor arranges its own rights-of-way, etc., and provides cabling at the nearest manhole to the central office with enough slack to be pulled into the central office asklashed to the central office with enough

• Similar to Physical Collocation and Virtual Collocation, planning and implementation of a collocation area adjacent to Ameritech's central office requires manpower effort on the part of Ameritech. To ensure fair and reasonable compensation for incumbent manpower, the central office model layout incorporates a planning component outlining the expected incumbent manpower requirements to implement a competitor collocation request using best practice processes in a competitive environment. (Tr. 3633.)

PROPOSED CONCLUSIONS OF LAW

- Section 251(c)(6) of the Act defines collocation as "the duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements ..." See also 47 C.F.R. §51.323(k)(1).
- The CLECs' CCM, through the use of its "best practices" methodology, determines rates that are just, reasonable, and nondiscriminatory, for all forms of collocation required by federal law and in use in the industry today.
- We observe that collocation at Ameritech's central office is largely under the control of Ameritech. In a competitive environment, an incumbent will not have the incentive to minimize the costs to competitors for collocation. For example, Ameritech will not have the incentive to make space in its central office available to a competitor on the same basis as it uses for making space available for additional equipment of its own. By basing the Model Central Office and Model Collocation space and thus investments on best practice space planning, the CCM ensures the inclusion only of costs associated with an efficiently located collocation space. Indeed, Ameritech has the incentive to gold plate the collocation arrangement unless the Commission vigorously applies the best practice standards to counter-balance that incentive. (Tr. Vol. 10, p. 3580.)
- The Model Collocation Area Layout assumes a best practice planning strategy that permits Ameritech to assign more than one collocation area in a central office based on available space in close proximity to incumbent cross-connects. This is in contrast to an arbitrary assumption (sometimes made by incumbents) that the first collocation area in a central office must be sized to accommodate all potential future competitors, even when that decision results in placement of the collocation area in a remote location far from the cross-connects. (Tr. Vol. 10, p. 3585.)

Commission is precluded from making an affirmative assessment of whether the costs imposed on competitors for collocation is nondiscriminatory and cost-based, as required by regulatory orders and the Federal Act. *Third*, Ameritech does not utilize a systematic method for determining whether costs should be accounted for as recurring or nonrecurring costs. As a result, Ameritech's cost studies arbitrarily account for many investments that systematically should be treated as recurring and not nonrecurring costs.

- This Commission's implementation of Cageless Collocation will encourage the development of facilities based competition in Wisconsin. Cageless Collocation is an important form of collocation for competitors requiring little in the way of telecommunications space or those wanting to introduce new technology in the marketplace. Specifically, Digital Subscriber Loop (DSL) technology is one that would be ideally suited to a Cageless Collocation arrangement. This technology does not require much floor space, only requiring approximately two relay racks for a configuration that can serve a substantial number of customers.
- In an ideal scenario, the CLEC would similarly be responsible to an installer for the total invoice associated with equipment and all cabling installation, and Ameritech would incur no initial cabling costs. However, Ameritech would have the incentive and ability to impose unnecessary cabling costs on competitors. If an incumbent knew that the competitor would have to pay an installer cabling costs no matter where Ameritech chose to place the collocated equipment, Ameritech would have the incentive to require the installer to place competitor equipment in a remote area of the central office, far from cross connects. To overcome Ameritech's incentive to impose unnecessary costs by virtue of its ability to dictate placement of virtually collocated equipment, the CCM includes incumbent investments for initial connectivity cabling based on certain cable lengths. By basing the connectivity installation on established cable lengths, the incentive for Ameritech to impose excess cabling costs on the competitors is mitigated. (Tr. Vol. 10, p. 3608.)
- Unfortunately, the nature of many of the other problems encountered within Ameritech's collocation cost studies is specific to the particular collocation element under study. Nevertheless, Mr. Turner identified specific concerns associated with many of Ameritech's collocation elements. Specifically, he addressed the following recurring collocation elements: (A) Cageless Collocation Central Office Floor Space; (B) Riser Space; (C) Power Consumption; (D) 200 Conductor Electrical Cross-Connect Block; (E) DSX-1 Panel; and (F) DS1/DS3 Repeaters. He then addressed the following poprecurring collocation elements: (A) Control Office Point Control Office Poin

of the required forms of collocation under the FCC Advanced Services Order. Specifically, Ameritech has failed to provide cost studies for Shared or Common Collocation and Adjacent Collocation. Further, with Cageless Collocation, Ameritech has developed the costs using assumptions that in no way reflect the guidance found in the Advanced Services Order.

• The CCM documentation in the record, not to mention Mr. Turner's voluminous and detailed testimony, provide an overwhelming case in support of the CCM. The record in support of Ameritech's cost studies pales in comparison.⁴

ISSUE I.H.(2)(a)

- (a) If Ameritech's model is selected;
 - 1. What inputs should be adjusted and why?

CLEC POSITION:

If Ameritech's collocation model is selected (over substantial record evidence to the contrary), the Commission should adjust the inputs for: (1) Cageless Collocation Central Office Space, (2) Riser Space, (3) Power Consumption, (4) 200 Conductor electrical Cross-Connect Block, (5) DSX-1 Panel, and (6) DS1/DS3 Repeaters, among other adjustments and corrections recommended by Mr. Turner.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.H.-1 through I.H.-40.

CLECs' Reply Brief: I.H.-1 through I.H.-10.

CLEC TESTIMONY REFERENCES:

See generally Vol. 10, pp. 3555-3926 (CLEC witness Turner, Public); Vol. 11,

⁴ There are three documents provided with the CCM that cause its supporting documentation to be superior.

pp. 3932-4118 (CLEC witness Turner, Confidential). *See specifically* Vol. 10, pp. 3570-3595, 3667-3675, and 3713-3717.

PROPOSED FINDINGS OF FACT

Mr. Turner identified specific concerns associated with many of Ameritech's collocation elements.

Cageless Collocation Central Office Floor Space

- Mr. Turner emphasized that it is important to understand that many of the errors that he discusses for Cageless Collocation Central Office Floor Space also affect Physical Collocation Central Office Floor Space. However, because of some offsetting assumptions between Ameritech's approach to developing the cost for Physical Collocation Central Office Floor Space and how the CLECs' CCM develops this same cost, the resulting rates are almost identical. This is not the case for Cageless Collocation Central Office Floor Space because, according to Mr. Turner, Ameritech has made so many errors and double-counts that Ameritech's costs and Mr. Turner's costs are widely divergent. Correcting Ameritech's errors brings its costs in line with those found in the CCM and makes Ameritech's Cageless costs consistent with its own calculation of floor space for Physical Collocation.
- Among the corrections that should be made to Ameritech's calculation of Cageless Collocation Central Office Floor Space, Mr. Turner focused on two that have the most significant impact. First, Ameritech has assumed for Physical (Caged) Collocation that for every foot of collocation space that exists within the collocation cage, one-half of a foot of collocation space is needed outside of the collocation cage for the common area. This ratio overstates the amount of space required for collocation. A good forward-looking estimate of this space is 37.5 square feet of space in front of a 100 square foot cage. Moreover, this is consistent with Mr. Turner review of many other collocation cost studies by other incumbents. In the CCM White Paper (attached to Mr. Turner's testimony as Appendix SET-4), Mr. Turner provides a diagram with dimensions that clearly illustrates why this quantity of common space is required to support the collocation cage. Ameritech did not provide this type of information in any form. However, while this assumption may be inaccurate (but directionally correct) for Physical (Caged) Collocation, it is absolutely wrong for Cageless Collocation. In Cageless Collocation, it is absolutely

- Second, Ameritech has double-counted the Space Requirement Factor for Building Support. Specifically, Ameritech's calculation of the investment per square foot for the central office already included the 33.33 percent factor for Building Support. However, Ameritech then applies this factor a second time to determine the amount of space needed for Cageless Collocation.
- Once corrected, the revised rate should also apply for virtual collocation. From a space standpoint, Virtual Collocation should be treated similarly to Cageless Collocation. Moreover, Mr. Turner has reviewed Ameritech's errors in the Virtual Collocation Cost Study and found them to be precisely the same as those for Cageless Collocation.

Riser Space

• Mr. Turner found Ameritech's calculations for the Riser Space monthly recurring particularly troublesome. Ameritech has made a remarkable change to the fill factor for this asset without any justification – one that is inconsistent with any cost study on this same type of asset that Mr. Turner has seen anywhere in the country. Specifically, Ameritech is assuming that the fill rate for fiber cable racking and fiber cable holes is only 10 percent. This is almost an order of magnitude smaller than what Ameritech used in Michigan. Moreover, it is completely unsupported by Ameritech in this proceeding and does not comport with efficient engineering practices. According to Mr. Turner, a more appropriate fill rate would be 85 percent.

Power Consumption

• According to Mr. Turner, one of the most unusual aspects of Ameritech's cost study for Power Consumption is that this collocation element is based on fuse amps as opposed to load amps. Mr. Turner has reviewed collocation cost studies for Southwestern Bell, Pacific Bell, GTE, Bell South, US West, and Sprint United and none of these companies has attempted to calculate or apply the cost for Power Consumption on a fuse amp basis. From an engineering standpoint, if the equipment receiving DC power requires 20 load amps of power, the power engineer will commonly fuse this power feed at approximately 50 percent above the load level yielding 30 fuse amps. The cost-causer in this situation is the 20 load amps that must be generated throughout the power plant to deliver this quantity of power to the equipment. The fact that a 30-amp fuse may be used by the engineer does not change the costs.

must be corrected to calculate more accurately the TELRIC for this cost element. (Tr. 3677.)

200 Conductor Electrical Cross-Connect Block

- There are two principal concerns with Ameritech's calculations for this recurring cost element. First, the underlying investment per 200 Conductor Electrical Cross-Connect Block is significantly overstated. Ameritech simply asserts a unit investment cost without any supporting documentation. However, when compared to the same investment component in the CCM an investment that is supported by a direct vendor quote Ameritech's value is shown to be significantly out of range. Second, Ameritech incorrectly applies the 377C investment account annual cost factors when it should use the 357C investment account annual cost factors.
- The CCM develops an investment for a 200 Conductor Electrical Cross-Connect Block of \$305.53. This investment is developed assuming that the terminal block investment must account for a pro rata share of the MDF, which the terminal block is attached to using an 85 percent fill factor. The cross-connect block investment itself is calculated using a 100 percent fill factor because it is used in its entirety by the collocator. All of the backup information regarding the quotes that were used to develop these investments is available in backup work papers for the CCM.
- Mr. Turner testified that another problem in Ameritech's calculation for the recurring cost of the 200 Conductor Electrical Cross-Connect Block is that it assumes that this investment falls into account 377C Digital Switch COE. All of the other interconnection arrangements (DS1, DS3, and fiber) use account 357C, which is the appropriate account for the 200 Conductor Electrical Cross-Connect Block as well. (Tr. 3679.)
- Incorporating both of these corrections into the cost for the 200 Conductor Electrical Cross-Connect Block is straightforward. Applying these modifications to Ameritech's cost calculations yields a more appropriate 200 Conductor Electrical Cross-Connect Block monthly recurring cost.

DSX-1 Panel

Similar to the 200 Conductor Electrical Cross-Connect Block discussed above, Ameritech has significantly overstated the investment for its DON.

- The Collocation Cost Model develops an investment for a DSX-1 Panel of \$1015.59. This investment is developed assuming that the DSX-1 Panel investment must account for a pro rata share of the DSX Frame, which the DSX-1 Panel is attached to using an 85 percent fill factor. The cross-connect block investment itself is calculated using a 100 percent fill factor because it is used in its entirety by the collocator. All of the backup information regarding the quotes that were used to develop these investments is available in backup work papers for the CCM. In short, a substantiated and more appropriate investment to use for the DSX-1 Panel is \$1015.59.
- Incorporating this correction into the cost for the DSX-1 Panel is straightforward. Applying these appropriate modifications to Ameritech's cost calculations yields a more appropriate DSX-1 Panel monthly recurring cost. (Tr. 3681.)

DS1/DS3 Repeaters

Repeaters only become necessary when the cable lengths for DS3 and DS1 circuits become too long (655 feet for a DS1 and 450 feet for a DS3). The FCC in evaluating the collocation costs of ILECs across the country found that it was inappropriate for ILECs to impose the cost of repeaters on CLECs for physical collocation. Specifically, the FCC found:

(I)t is unreasonable for the LECs to charge interconnectors for the cost of repeaters in the physical collocation arrangement because the record demonstrates that repeaters should not be needed for the provision of physical collocation service. The record demonstrates that ... a repeater is only necessary to maintain proper voltage level of an electronic signal when the length of cable between the interconnector's cage and the LEC's digital cross-connect bay exceeds 655 feet for a DS1 and 450 feet for a DS3. A cabling distance of 450 feet is a considerable distance, and no LEC demonstrates that it needs more than 450 feet to cable to obtain interconnection.

In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, CC Docket No. 93-162, FCC 97-208. Adopted June 9, 1997, Released June 13, 1997, paragraph 117, pg. 55-56.

In short, Ameritech's inclusion of DS1 and DS3 Repeaters is inappropriate in light of the evaluation of the FCC and in keeping with nondiscriminatory treatment of

Wisconsin. First, Ameritech, with limited exceptions, has significantly increased its reported costs over reasonable levels as compared with the CCM or other external costing guidelines. Second, Ameritech utilizes a per-foot individual case basis ("ICB") approach to costing many of the elements associated with collocation. As such, the Commission is precluded from making an affirmative assessment of whether the costs imposed on competitors for collocation is nondiscriminatory and cost-based, as required by regulatory orders and the Federal Act. Third, Ameritech does not utilize a systematic method for determining whether costs should be accounted for as recurring or nonrecurring costs. As a result, Ameritech's cost studies arbitrarily account for many investments that systematically should be treated as recurring and not nonrecurring costs.

- Ameritech's collocation studies are permeated by specific problems as well.
 Regarding Cageless Collocation Central Office Floor Space, we agree with Mr.
 Turner that Ameritech has made many errors and double-counts. Correcting
 Ameritech's errors brings its costs in line with those found in the CCM and makes
 Ameritech's Cageless costs consistent with its own calculation of floor space for
 Physical Collocation.
- Ameritech has double-counted the Space Requirement Factor for Building Support. Specifically, Ameritech's calculation of the investment per square foot for the central office already included the 33.33 percent factor for Building Support. However, Ameritech then applies this factor a second time to determine the amount of space needed for Cageless Collocation. In other words, Ameritech inflated the investment for this factor, but then also inflated the amount of space for Cageless Collocation using this factor, thereby double-counting its effect in the result. Making these two corrections lowers the Cageless Collocation Central Office Floor Space charge to the amount described at Tr. 3674.
- Virtual Collocation should be treated similarly to Cageless Collocation. Mr. Turner has reviewed Ameritech's errors in the Virtual Collocation Cost Study and found them to be precisely the same as those for Cageless Collocation. The same corrections should be made in the Virtual Collocation context.
- Ameritech's calculations for the Riser Space monthly recurring cost are particularly troublesome. While Mr. Turner could not go into the details of Ameritech's filing of the same cost element in Michigan, he knew that Ameritech made several errors in developing the cost for Riser Space that he reviewed in an affidavit. Ultimately, the Commission in Michigan completely rejected Ameritech's cost study and adverted the

cable holes is only 10 percent. This is almost an order of magnitude smaller than what Ameritech used in Michigan. Moreover, it is completely unsupported by Ameritech in this proceeding and does not comport with efficient engineering practices. A more appropriate fill rate would be 85 percent.

- Making this modification to Ameritech's cost study reduces the Riser Space per Foot as described at Tr. 3676. Furthermore, this element is still effectively an ICB charge (the problems of which were described earlier) because it is charged on a per foot basis.
- We agree with Mr. Turner that one of the most unusual aspects of Ameritech's cost study for Power Consumption is that this collocation element is based on fuse amps as opposed to load amps. From an engineering standpoint, if the equipment receiving DC power requires 20 load amps of power, the power engineer will commonly fuse this power feed at approximately 50 percent above the load level yielding 30 fuse amps. The cost-causer in this situation is the 20 load amps that must be generated throughout the power plant to deliver this quantity of power to the equipment. The fact that a 30-amp fuse may be used by the engineer does not change the costs. This must be corrected to calculate more accurately the TELRIC for this cost element. (Tr. 3677.)
- Like Mr. Turner, we have two principal concerns with Ameritech's calculations for the 200 Conductor Electrical Cross-Connect Block recurring cost element. First, the underlying investment per 200 Conductor Electrical Cross-Connect Block is significantly overstated. Ameritech simply asserts a unit investment cost without any supporting documentation. However, when compared to the same investment component in the CCM an investment that is supported by a direct vendor quote Ameritech's value is shown to be significantly out of range. Second, Ameritech incorrectly applies the 377C investment account annual cost factors when it should use the 357C investment account annual cost factors.
- Similar to the 200 Conductor Electrical Cross-Connect Block discussed above, Ameritech has significantly overstated the investment for its DSX-1 panel and provided no supporting documentation for this assumption. Ameritech simply asserts a unit investment cost without any supporting documentation. However, when compared to the same investment component in the Collocation Cost Model an investment that is supported by a direct vendor quote Ameritech's value is shown to be significantly out of range.

ISSUE I.H.(2)(a)(2)

2. Are there any other adjustments that should be made to collocation costs?

CLEC POSITION:

If Ameritech's collocation model is selected (over record evidence to the contrary), the Commission should at a minimum make adjustments to the following: (1) Ameritech's Central Office Build-out charge; (2) Ameritech's Power Delivery cost study; (3) inappropriate use of a per-foot ICB costing approach; and (4) inappropriate use of nonrecurring costs. Ameritech's cost studies arbitrarily account for many investments that systematically should be treated as recurring and not nonrecurring costs.

CLEC BRIEF REFERENCES:

See References for I.H.(2)(a)1, above.

CLEC TESTIMONY REFERENCES:

See References for I.H.(2)(a)1, above.

PROPOSED FINDINGS OF FACT

Central Office Build Out

 According to CLEC witness Mr. Turner, there are numerous problems with Ameritech's Central Office Build Out charge. Moreover, Ameritech has not presented the supporting data that would justify the nonrecurring charge level it intends to levy. Further, the data Ameritech did provide is untraceable from the supporting documentation through to the results because the values do not match up through the cost study. Ameritech's resources in planning collocation arrangements. Third, Ameritech has inappropriately included Asbestos Abatement Evaluation costs on a unilateral basis. This is strictly precluded by the FCC's Second Report and Order. Fourth, many of the investments associated with the Central Office Build Out charge benefit more than one collocator and clearly have a life beyond that of a single collocator. As such, Mr. Turner recommended that the Commission treat this charge as a recurring cost if it is included at all.

- As to the first point, Ameritech has admitted in several forums that the costs incorporated into the Central Office Build Out charge include retrofitting investments. The clearest representation of this is in Ameritech's FCC Tariff No. 2 Section 16.
- Ameritech's definition for the Central Office Build Out charge encompasses some investments that would be forward-looking in nature (AC power circuit for the collocation arrangement) and some that are clearly not (additions to and distribution of heating, ventilation, and air conditioning). Others of the items listed may or may not be forward-looking in nature, such as security devices. For example, if Ameritech were retrofitting the office to bring it up to modern security measures (installation of a new card reader system), then it would not be forward-looking. If Ameritech were augmenting the system (adding a card reader for the collocation area) to equip the area for collocation, then this would be forward-looking. The test is to first understand what would exist in a forward-looking central office and then prepare that office for a collocation arrangement. In short, the best way to determine what costs should stay or go would be for Ameritech to give a careful accounting of the average cost associated with the various cost categories within the Central Office Build Out. (Tr. 3685.)
- As to the second point, Ameritech has identified significant levels of administrative and travel time associated with planning the Central Office Build Out that do not appear to be an efficient use of time. First, Ameritech has assumed that the Collocation Coordinator spends more than a third of his/her time simply traveling to the central office. It is likely that the Collocation Coordinator would need to travel to the central office, but no more than what Ameritech estimated for the CSPEC which is responsible for the central office engineering. Second, Ameritech has assumed an enormous amount of administrative time for its engineers. Specifically, 47 hours out of the 71 hours (total) for the four engineering functions is associated with administrative activities. Ameritech has provided no justification for this large percentage of administrative work from engineering personnel. To reflect an efficient

precisely excluded this type of investment without the incumbent providing additional documentation as to how it would not also benefit from the removal of the asbestos. In short, Ameritech has not provided this type of documentation and this cost should not be permitted for collocation. (Tr. 3686.)

• As to the fourth point, regardless of what the restatement investment is for Ameritech's Central Office Build Out, this investment ultimately provides the capacity to serve multiple collocators and is reusable beyond just the occupancy of a single collocator. Ameritech actually calculates the recurring cost for the Central Office Build Out using the appropriate Annual Charge Factor for account 10C (Buildings). Ameritech then inaccurately calculates the present value of this monthly cost across only seven years. In reality, this investment will have a much longer useful life, but should be paid for by the actual occupants of the collocation arrangement. As such, Ameritech should be required to treat this investment, if it is permitted at all, as a recurring cost.

Power Delivery

According to Mr. Turner, when compared to other incumbent local exchange companies' cost studies, Ameritech's Power Delivery cost study for Wisconsin represents an extremely poor design. First, Ameritech inappropriately includes the Battery Distribution Fuse Bay ("BDFB") in the nonrecurring Power Delivery charge rather than in the Power Consumption recurring rate. Second, there are math and logic errors throughout the Power Delivery cost study. Third, fusing for the BDFB in Ameritech's cost study suggests an 800 amp BDFB (which would be a more appropriate size) rather than a 400 amp BDFB, which Ameritech inappropriately assumed in its cost calculations. Fourth, Ameritech assumes no sharing of the cable rack from the power plant to the BDFB when in fact Ameritech would be placing multiple power cables on these racks for multiple BDFBs. Fifth, the Secondary Power Feed (which is the only cost that should be included in the Power Delivery collocation element) is grossly overstated for at least two reasons. First, Ameritech has inappropriately included the cost for cage grounding in every power feed from the BDFB to the collocation cage. This is primarily erroneous in that Ameritech has already captured the cost of providing a ground cable to the collocation cage in the Central Office Build Out charge. Second, Ameritech assumes no sharing of the cable rack between the BDFB and the collocation area when in fact Ameritech's own forward-looking assumptions account for multiple collocators in each collocation arrangement. Further, much of the racking between the RDFR and the collection

cost analysis are based on cabling distances over which Ameritech has complete control. Ameritech has documented what its costs are on a per foot basis, but has completely removed from the Commission's review the distance that this cost will be applied to. Ameritech has considerable motivation to make the cabling distances as long as possible. Moreover, Ameritech may prefer to give its own equipment preferential placement within the central office or simply drive up the entry costs (via collocation charges) for its direct competitors.

- Second, Ameritech notes in its tariffs as well as its backup work papers that it
 reserves the right to charge competitors for exceptional (or extraordinary) costs to
 provide collocation on an ICB basis.
- According to Mr. Turner, there is a very practical reason why Ameritech's use of ICB pricing causes problems for competitors. ICB pricing for collocation prevents competitors from being able to predict with any certainty the cost of collocation causes them to experience significant time delays. In ICB pricing, the competitor places a collocation order with Ameritech, Ameritech prices out the cost of the collocation arrangements (normally within 30 days), and provides this quote to the competitor. This is the first time the competitor knows what the collocation arrangement will cost. Mr. Turner's experience has been that when the ICB price comes back for collocation, it is frequently so high that the competitor then begins a time-consuming process of negotiating with the incumbent to change the parameters of the collocation arrangement so as to lower the cost. While the competitor plays a role in this process, the reason for the problem is that the prices were not known beforehand. Ameritech should be required to produce a definitive set of prices for collocation, the result of which would be that the competitor can review what it needs with respect to collocation and know precisely what the price will be. Further, with a definitive set of prices, no time will be lost putting together a quote for the competitor, nor will any time be lost to renegotiating the prices of the collocation arrangement.
- The problem of ICB pricing in Ameritech's collocation cost studies can be remedied in a simple manner with Ameritech's cost studies. Mr. Turner described an approach that should be used to quantify the distances for various connectivity points within the central office. Briefly, he suggested using the average distances within a forward-looking Ameritech central office to define the distances for the presently configured per foot collocation elements. To the extent that Ameritech represents that it does not have this type of information, Mr. Turner recommended using the distances contained in the CCM. The cabling distances within the CCM are based on a forward looking.

Ameritech's designations of investments into these two categories are purely arbitrary at many points. Because of the inhibiting impact that large one-time charges can have on competition, this Commission should be particularly concerned that a consistent approach be used in determining whether an investment is recovered using nonrecurring or recurring costs.

- Mr. Turner outlined an approach used in the CCM for systematically determining whether an investment should be treated as a nonrecurring or recurring cost. In short, this approach evaluates for each investment category whether the asset is reusable and/or sharable with the incumbent. If an asset is reusable, the CCM appropriately determines the cost over the life of the asset and reflects the cost as a monthly recurring charge. Further, if an asset is sharable with the incumbent (such as overhead racking, power, or building space), then again it is treated as a recurring cost. However, in this circumstance, the investment is loaded with the operations and maintenance expenses, as the incumbent will be responsible for maintaining these assets. Finally, if the investment is not sharable or reusable, then these assets should be treated as a nonrecurring cost. (Tr. 3671.)
- This approach would not be difficult for Ameritech to implement. It turns out that for many of the investments that Ameritech has inappropriately treated as nonrecurring costs, Ameritech has already calculated the monthly recurring cost and simply net present valued this monthly stream of costs over 84 months. If the Commission determined that the investment should be treated as a monthly cost as recommended in Mr. Turner's testimony, in many instances the Commission could use the calculations already made by Ameritech prior to the present value step.

PROPOSED CONCLUSIONS OF LAW

• The Physical Collocation, Cageless Collocation, and Virtual Collocation cost studies filed by Ameritech contain numerous general and specific fundamental problems that effectively limit their use for determining cost-based rates for collocation in Wisconsin. First, Ameritech, with limited exceptions, has significantly increased its reported costs over reasonable levels as compared with the CCM or other external costing guidelines. Second, Ameritech utilizes a per-foot individual case basis ("ICB") approach to costing many of the elements associated with collocation. As such, the Commission is precluded from making an affirmative assessment of whether the costs imposed on competitors for collocation is nondiscriminatory and cost-based, as required by regulatory orders and the Federal Act. Third, Ameritech does not utilize a systematic method for determining whether costs should be

intends to levy. Further, the data Ameritech did provide is untraceable from the supporting documentation through to the results because the values do not match up through the cost study.

- At a minimum, Ameritech must correct four problems before establishing the level of the Central Office Build Out cost. First, the Additional Real Estate Central Office Build Out costs are substantial and virtually unsubstantiated. This investment represents almost half of the Central Office Build Out cost. The principal problem with this investment is that Ameritech has admitted that non-TSLRIC retrofitting investments are included in the estimate. Second, significant levels of administrative and travel charges have been loaded into the Central Office Build Out charge. These cannot represent an efficient use of Ameritech's resources in planning collocation arrangements. Third, Ameritech has inappropriately included Asbestos Abatement Evaluation costs on a unilateral basis. This is strictly precluded by the FCC's Second Report and Order. Fourth, many of the investments associated with the Central Office Build Out charge benefit more than one collocator and clearly have a life beyond that of a single collocator.
- As described above, Ameritech's Power Delivery cost study for Wisconsin suffers from multiple flaws and must be corrected if the Commission intends to use its results.
- There are two areas where Ameritech has followed an ICB approach to calculating the costs for collocation. First, many of the cost elements in Ameritech's collocation cost analysis are based on cabling distances over which Ameritech has complete control. Ameritech has documented what its costs are on a per foot basis, but has completely removed from the Commission's review the distance that this cost will be applied to. Ameritech has considerable motivation to make the cabling distances as long as possible. Moreover, Ameritech may prefer to give its own equipment preferential placement within the central office or simply drive up the entry costs (via collocation charges) for its direct competitors. We will require that Ameritech's collocation cost analysis incorporate the distances that the costs will apply to so as to ensure that the costs are nondiscriminatory and based on efficient, forward-looking cost principles. (Tr. 3668.)
- Ameritech's cost studies fail to use a systematic approach to determining whether a collocation investment should be treated as a nonrecurring or recurring cost. As such, Ameritech's designations of investments into these two categories are purely arbitrary at many points. Because of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact that he are the contract of the inhibiting impact the contract of the inhibiting impact that he contract of the contr

ISSUES I.H.(3)-(4)

- (3) Should collocation rates be set in terms of per foot costs or should averaged distances be used to represent any collocation arrangement?
 - (a) If average distances are selected what average distances should be used?
- (4) Should collocation rates be standardized rates, or should any collocation rates be determined on an individual basis?

CLEC POSITION:

For the many reasons discussed by Mr. Turner in his testimony, collocation rates should not be set in terms of per foot costs, but rather should be based on averaged distances. Similarly, collocation rates should be standardized, to the extent possible. Both of these measure will help to mitigate any anti-competitive conduct that an incumbent may exhibit in addressing collocation requests.

CLEC BRIEF REFERENCES:

CLECs' Initial Brief: I.H.-5, I.H.-24 through I.H.-27.

CLECs' Reply Brief: I.H.-2 through I.H.-6.

CLEC TESTIMONY REFERENCES:

See Vol. 10, pp. 3667-3670, 3713-3719 (CLEC witness Turner, Public).

PROPOSED FINDINGS OF FACT

• See Findings under I.H.(2)(a)2, above.

PROPOSED CONCLUSIONS OF LAW

• See Conclusions under I.H.(2)(a)2, above.



Dated this 29th day of August 2001.

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